

5

CA2 ALEV 15 1973P058  
Land Use and Resource Development in the  
Eastern Slopes, Proceedings of th 1



3 3398 00135 1955

SP1974-6484

**LAND USE**  
**and**  
**RESOURCE DEVELOPMENT**  
**in the**  
**EASTERN SLOPES**

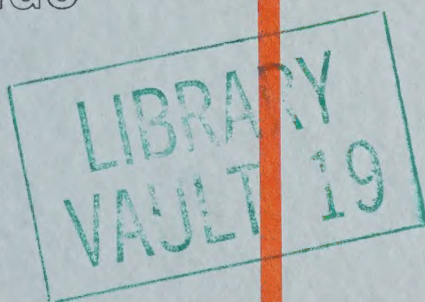
**ATHABASCA RIVER BASIN**

**PROCEEDINGS**  
**OF THE**  
**PUBLIC HEARINGS**

**JUNE - JULY, 1973**

**PART VIII**

**EDMONTON**



**ENVIRONMENT CONSERVATION**  
**AUTHORITY**



**ALBERTA**





Digitized by the Internet Archive  
in 2024 with funding from  
Legislative Assembly of Alberta - Alberta Legislature Library



**LAND USE  
and  
RESOURCE DEVELOPMENT  
in the  
EASTERN SLOPES**

**ATHABASCA RIVER BASIN**

**PROCEEDINGS  
OF THE  
PUBLIC HEARINGS**

**JUNE - JULY, 1973**

**PART VIII**


**EDMONTON**

**ENVIRONMENT CONSERVATION  
AUTHORITY**

9912-107 Street  
Edmonton, Alberta

T5K 1G5





Digitized by the Internet Archive  
in 2024 with funding from  
Legislative Assembly of Alberta - Alberta Legislature Library



THE PROCEEDINGS ARE PUBLISHED IN TEN VOLUMES, EACH CONTAINING  
A TOTAL TRANSCRIPT OF THE PRESENTATIONS AND DISCUSSION HELD IN THE  
LOCATIONS DESIGNATED BELOW:

OLDMAN RIVER BASIN

COLEMAN, JUNE 11 & 12 - PART I  
LETHBRIDGE, JUNE 13 & 14 - PART II

BOW RIVER BASIN

CALGARY, JUNE 18 - PART III - A  
CALGARY, JUNE 19 & 20 - PART III - B  
CANMORE, JUNE 22 & 23 - PART IV

NORTH SASKATCHEWAN RIVER BASIN

ROCKY MOUNTAIN HOUSE, JUNE 26 - PART V  
RED DEER, JUNE 28 & 29 - PART VI

ATHABASCA RIVER BASIN

HINTON, JULY 3 - PART VII  
EDMONTON, JULY 5, 6 & 7 - PART VIII

SMOKY RIVER BASIN

GRANDE CACHE, JULY 10 - PART IX  
GRANDE PRAIRIE, JULY 12

SUPPLEMENTARY SUBMISSIONS

- PART X - A  
- PART X - B

COPIES OF THESE VOLUMES  
ARE AVAILABLE ON REQUEST TO:

ENVIRONMENT CONSERVATION AUTHORITY,  
9912 - 107 STREET,  
EDMONTON, ALBERTA.  
T5K 1G5

PRICE: \$4.00 PER VOLUME  
\$40.00 PER COMPLETE SET

SEPTEMBER, 1973



## FOREWORD

Geographically, Alberta is a land of diversity. From the dry irrigated croplands of the south through the lush farming and ranching country of central Alberta to the sparsely settled wild-lands of the north the landscape presents a constantly changing panorama.

Nowhere, however, is diversity more apparent than in the approach to the Rockies. There indeed, as one enters the region of the Eastern Slopes, Alberta takes on its most dramatic change.

As though to prepare one in advance for the enormity of the Rocky Mountains, the landscape assumes a rolling gait as the farmlands and ranchlands of the plains give way to the forested areas of the foothills.

In this area, which has come to be known as the Eastern Slopes, lands have been mostly protected and preserved for public ownership in the name of the Crown, and important national and provincial parks are located here.

To many Albertans, the Eastern Slopes represent an area of, as yet, relatively undisturbed forests which should be preserved in their natural state for posterity.

To others, the area represents a bountiful supply of valuable resources which should be developed to the benefit of Albertans.

Some others view the Eastern Slopes in the light of combined benefits and hope that they can be made to yield their riches without prejudice to the natural state.

Of the treasures that reside in the Eastern Slopes, recreation ranks high in the minds of many people and indeed, recreation in its many forms is now enjoyed in the Eastern Slopes in both winter and summer by many thousands of people each year.



In addition, land in the Eastern Slopes is now used or is proposed for use for such purposes as tourism, urban development, forest utilization, mineral resource industries, surface mining, oil and gas development, underground coal mining, agriculture, watershed conservation, domestic water supplies, hydroelectric power developments, wildlife and fishing management, wilderness and natural areas, institutional use by charitable, religious and other groups, archaeological sites, research, Indian reservations and national and provincial parks.

These various present and potential uses of resources within the area may either have no effect on each other, complement each other, conflict with each other, or relate to each other in sequential ways.

In order to publicly explore these interests and discover the concerns they generate, the Environment Conservation Authority was requested on behalf of the Government of Alberta to hold comprehensive and wide-ranging hearings on Land Use and Resource Development in the Eastern Slopes.

It was the objective of the hearings to enquire into all potential uses and to formulate ways in which optimum benefits and environment conservation could be achieved now and for the future from the various resources of the Eastern Slopes.

A further objective was to consider and evaluate the views of the public on specific recreational and tourist development proposals for the area. Finally, the Authority would lay the views presented to it, along with its own recommendations thereon, before the Government of Alberta.

For the purpose of the public hearings, the Eastern Slopes were divided into five separate districts corresponding to the five major watershed basins and outlined by the statutory boundaries of the four Regional Planning Areas and Improvement District No. 14.

The eastern boundary of the area was taken as the eastern edge of the foothills, prescribed by an arc lying to the west of the cities of Lethbridge, Calgary, Red Deer, Edmonton and Grande Prairie.

As background to the hearings, the Environment Conservation Authority released a series of 12 Information Bulletins; five of these pertained specifically to the separate watershed basins and were prepared by the individual regional planning commissions.

Hearings were held (during June and July of 1973) in each of the watershed basins as well as in the five major cities.

The present publication constitutes the Proceedings of the Public Hearings on Land Use and Resource Development in the Eastern Slopes. A separate volume has been allocated for each location, and each volume contains a complete transcript of all presentations heard at that location as well as the discussions which followed.

In addition, a final volume contains all written submissions which were received prior to and following the hearings, but which were not presented verbally at the hearings, along with an index to all volumes.



## ACKNOWLEDGEMENTS

The contribution that a public hearing can make to the advancement of any subject depends very largely on the submissions, briefs and presentations made to it by members of the public.

The Environment Conservation Authority is particularly appreciative of the efforts of the very large number of individuals, groups and associations that contributed both orally and in writing to its series of hearings on Land Use and Resource Development in the Eastern Slopes.

For those who prepare submissions it is most desirable that they have ready access to relevant information on the subject. This involves not only compiling and presenting the information in an acceptable form, but also distributing it widely to the interested public.

In this most important aspect of the work leading up to the public hearings the Authority received considerable assistance from the Regional Planning Commissions of the individual watershed basins covered by the hearings.

Not only did the officers and staffs of these commissions prepare comprehensive and highly informative position statements on behalf of the Authority for each basin, but at each location a senior official of the commission presented the position statement to the Authority at the beginning of the hearing, and most ably responded to the detailed questioning which followed.

For these invaluable services the Authority expresses its sincere thanks to the officials and staff of the Oldman River, Calgary, Red Deer, and Peace River Regional Planning Commissions and Improvement District No. 14 of the Provincial Planning Branch.

Further very important information of value to those preparing briefs was produced by a special *ad hoc* committee of the Authority's Science Advisory Committee. For the very able discussions and recommendations on land use conflicts which they presented in Information Bulletin No. 12 the Authority wishes to compliment and thank the members of this committee.

In locating, setting up and operating its extensive chain of information centres throughout the province the efforts of the Authority would have been frustrated without the willing co-operation and expert assistance of a number of people and organizations.

To the Universities of Lethbridge, Calgary and Alberta, the Regional Planning Commissions of Oldman River, Calgary, Red Deer and Peace River, the Community Colleges of Lethbridge, Red Deer and Peace River, and the public libraries of Blairmore, Coleman, Calgary, Canmore, Drumheller, Edmonton, Edson, Grande Cache, Grande Prairie, Hinton, Lethbridge, Lloydminster, Peace River, Red Deer, Rocky Mountain House, Wetaskiwin and Whitecourt, and their staff, the Authority expresses its sincere thanks.

The Authority also gratefully acknowledges the efforts of the Conservation and Utilization Committee of the Government of Alberta for their fine pre-hearing report, "A Choice of Land Use Alternatives", and the Department of Lands and Forests for their assistance in processing the many commercial proposals for tourism and recreational projects as well as for providing a competent addition to the Authority's observer staff for the hearings.

Finally, to its own staff, whose unfailing support and tireless efforts sustained the many extended sessions of the hearings, the Authority takes pride in expressing its gratitude.

W.R. TROST,  
Chairman,  
Environment Conservation Authority.



PART VII  
TABLE OF CONTENTS

FOREWORD .....	ii
ACKNOWLEDGEMENTS .....	v
INTRODUCTION .....	xv

HINTON - JULY 3

ALBERTA DEPARTMENT OF MUNICIPAL AFFAIRS -

PROVINCIAL PLANNING BRANCH

Presented by L. Cooke .....	816-1
Questioning by the Authority .....	817

DENISON MINES LIMITED

Presented by W. Riva .....	818-1
Questioning by the Authority .....	819

NORTH WESTERN PULP AND POWER LTD.

Presented by D. Crossley .....	822-1
Questioning by the Authority .....	823

NORTH WESTERN PULP AND POWER LTD.

Presented by G. Parker .....	825-1
Questioning by the Authority .....	826

ALBERTA WILDERNESS ASSOCIATION

Presented by Dr. R. Pharis .....	826-1
----------------------------------	-------

ZONE 4-5, ALBERTA FISH & GAME ASSOCIATION

Presented by R. Tanghe .....	826-9
Questioning by the Authority .....	827

CANADIAN YOUTH HOSTELS ASSOCIATION - NORTHWEST REGION

Presented by E. Hammer .....	829-1
Questioning by the Authority .....	830

# SMALLBOY GROUP

Presented by: Chief Robert Smallboy .....	831
L. Roan .....	832
M. Yellowbird .....	832
(All interpreted by E. Bellerose)	
E. Bellerose .....	832

# CANADIAN PETROLEUM ASSOCIATION

Presented by I. Bryden .....	834-1
Questioning by the Authority .....	835

# ALBERTA FISH & GAME ASSOCIATION

Presented by E. Kure .....	837
Questioning by the Authority .....	838

# CARDINAL RIVER COALS LIMITED

Presented by J. Aiello .....	838-1
Questioning by the Authority .....	839

# HINTON FISH & GAME ASSOCIATION

Presented by J. Cardiff .....	840-1
Questioning by the Authority .....	841

C. LACY .....	842-1
---------------	-------

# MANALTA COAL LIMITED

Presented by E. Panchysyn .....	842-12
Questioning by the Authority .....	843

# TOWN OF HINTON

Presented by R. Ellis .....	846-1
Questioning by the Authority .....	847

F. PLUIM .....	848-1
Questioning by the Authority .....	849



R. WALSH .....	851
Questioning by the Authority .....	852
 T. KILBORN .....	 852-1
Questioning by the Authority .....	853
 MRS. G. GEORG .....	 854-1
Questioning by the Authority .....	855
 TOWN OF EDSON COUNCIL AND CHAMBER OF COMMERCE	
Presented by Rev. L. Halliwell .....	856-1
Questioning by the Authority .....	857
 HINTON & DISTRICT CHAMBER OF COMMERCE	
Presented by D. Steele .....	858-1
Questioning by the Authority .....	859
 "FOLDING MOUNTAIN RECREATION AREA" - JASPER EAST RESORTS LTD.	
Presented by D. Makale .....	861-1
Questioning by the Authority .....	862
Discussion on Proposal .....	868
 OPEN DISCUSSION PERIOD .....	 875

## PART VIII

FOREWORD .....	ii
ACKNOWLEDGEMENTS .....	v
INTRODUCTION .....	xv

### EDMONTON - JULY 5

ALBERTA DEPARTMENT OF MUNICIPAL AFFAIRS - PROVINCIAL PLANNING BRANCH	
Presented by L. Cooke .....	877-1
Questioning by the Authority .....	878

LUSCAR LIMITED

Presented by G. Coates .....	882-1
Questioning by the Authority .....	883

ALBERTA WILDERNESS ASSOCIATION

Presented by L. Kylo .....	893-1
Questioning by the Authority .....	894

P. GORDON .....	894-1
Questioning by the Authority .....	895

CANADIAN PETROLEUM ASSOCIATION

Presented by H. Becker .....	898-1
------------------------------	-------

B. KREGOSKY .....	898-2
-------------------	-------

ENVIRONMENT CANADA

Presented by Dr. G. Silver .....	898-25
Questioning by the Authority .....	899

COMMITTEE FOR INDEPENDENT CANADA

Presented by J. Russell .....	904-1
Questioning by the Authority .....	905

ST. ALBERT FISH & GAME ASSOCIATION

Presented by F. Miller .....	907-1
Questioning by the Authority .....	908

C. SCHRODER .....	909-1
Questioning by the Authority .....	910

NORTH WEST VOYAGEURS CANOE CLUB

Presented by D. Fackre .....	910-1
Questioning by the Authority .....	911

ALBERTA INSTITUTE OF PEDOLOGY

Presented by Dr. J. Toogood and Dr. W. Pettapiece .....	912-1
Questioning by the Authority .....	913

ENVIRONMENTAL PROTECTION GROUP OF THE PUBLIC ADVISORY-  
COMMITTEE ON THE ENVIRONMENT

Presented by Dr. G. Griffiths .....	916-1
Questioning by the Authority .....	917

NATIONAL & PROVINCIAL PARKS ASSOCIATION OF CANADA -  
EDMONTON CHAPTER

Presented by Dr. G. Griffiths .....	918-1
Questioning by the Authority .....	919

INTERNATIONAL SNOWMOBILE INDUSTRY ASSOCIATION

Presented by W. Jobe, Jr. ....	920-1
Questioning by the Authority .....	921

SCIENCE ADVISORY *AD HOC* COMMITTEE ON THE EASTERN SLOPES

Presented by Dr. R. Ironside .....	924-1
------------------------------------	-------

DR. L. HILLS .....	925-1
Questioning by the Authority .....	926

P. MORCK .....	928-1
----------------	-------

G. PEEL .....	928-6
Questioning by the Authority .....	929



TRACT EQUIPMENT LIMITED	
Presented by B. Lambert .....	930
Questioning by the Authority .....	931
SHERWOOD PARK FISH AND GAME ASSOCIATION	
Presented by Miss L. Brown .....	931-1
Questioning by the Authority .....	932
WESTERN CANADA SNOWMOBILE FEDERATION	
Presented by W. Shields .....	932-1
Questioning by the Authority .....	933
ALBERTA SNOWMOBILE ASSOCIATION	
Presented by D. Blakeman .....	935-1
Questioning by the Authority .....	936
MRS. B. FAKELEY .....	938
Questioning by the Authority .....	939
G. FAULDER .....	939-1
Questioning by the Authority .....	940
D. WHITE .....	940-1
MRS. J. JOHNSTON .....	942-1
G. PETERSEN .....	943
OPEN DISCUSSION PERIOD .....	944

EDMONTON - JULY 6

CANADIAN NATURE FEDERATION

Presented by T. Mosquin .....	951-1
Questioning by the Authority .....	952

ALBERTA GEOGRAPHICAL SOCIETY

Presented by Dr. A. Laycock .....	954-1
Questioning by the Authority .....	955

CALGARY POWER LIMITED

Presented by T. Stanley .....	958-1
Questioning by the Authority .....	959

ALPINE CLUB OF CANADA AND EDMONTON SECTION -

ALPINE CLUB OF CANADA

Presented by Dr. H. Habgood .....	960-1
Questioning by the Authority .....	961

EDMONTON REGIONAL PLANNING COMMISSION

Presented by N. Giffen .....	962-1
Questioning by the Authority .....	963

PEGASUS EXPERIMENTAL METALS AND MINING LTD.

Presented by A. Fennell .....	966-1
Questioning by the Authority .....	967

ALBERTA WILDERNESS ASSOCIATION

Presented by J. Eickmeier .....	968-1
---------------------------------	-------

"MOUNT CLINE LEISURE RESORT" - CONVEX ASSOCIATES

Presented by K. Crockett .....	968-2
Questioning by the Authority .....	969
Discussion on Proposal .....	974

ALBERTA YOUTH HOSTELS COUNCIL - C.Y.H.A.

Presented by G. Rathbone .....	977-1
Questioning by the Authority .....	981
Discussion on Proposal .....	988

EDMONTON - JULY 7

NORTH-WESTERN SNOWMOBILE ASSOCIATION

Presented by G. McLean .....	992-1
Questioning by the Authority .....	993

A. WELSH .....	994
Questioning by the Authority .....	998

J. FINLAY .....	1002-1
Questioning by the Authority .....	1003

ALBERTA RECREATION AND PARKS ASSOCIATION

Presented by D. O'Donnell .....	1006
Questioning by the Authority .....	1008

L.V. SMITH .....	1008-1
Questioning by the Authority .....	1009

MS. M. GAWLAK .....	1010-1
Questioning by the Authority .....	1011

MISS KATI DOWLING .....	1012
-------------------------	------

MRS. A. COLE .....	1013
--------------------	------

OPEN DISCUSSION PERIOD .....	1014
------------------------------	------



**LAND USE  
and  
RESOURCE DEVELOPMENT  
in the  
EASTERN SLOPES**

**INTRODUCTION**

**ENVIRONMENT CONSERVATION  
AUTHORITY**

**ALBERTA**



## INTRODUCTION

The Environment Conservation Authority was requested by the Honourable W.J. Yurko, Minister of the Environment, to hold public hearings on land use and resource development in Alberta's eastern slopes of the Rocky Mountains. These hearings took place during June and July, 1973 in Coleman, Lethbridge, Calgary, Canmore, Rocky Mountain House, Red Deer, Hinton, Edmonton, Grande Cache and Grande Prairie.

### PREPARATION FOR THE HEARINGS

In order to place background information before the public, a series of information bulletins was published. Five of these were prepared by the relevant regional planning commissions and the Provincial Planning Board, and dealt specifically with their sections of the eastern slopes. The additional bulletins were produced by the Authority or by various involved agencies.

A very extensive mailing of this material was made to interested groups, organizations and individuals. As well, a system of information centres was established in each of the hearing locations as well as in other relevant locations. These centres were supplied with sets of background publications, as well as a reading list and bibliography on the hearing subject.

Direct public contact was developed and maintained through Authority member visits throughout the study area and through continual contact with the various sections of the media.

Advertising for the hearings took various forms. Newspapers contained general notices inviting participation, specific advertisements advising of local times and locations, and "legal" notices listing what commercial recreational proposals would be discussed at specific hearing locations. Radio and television were utilized in much the same manner to inform and invite public participation.

THE PUBLIC HEARINGS

The dates and places of the hearings were as follows:

Coleman	June 11 and 12
Lethbridge	June 13 and 14
Calgary	June 18, 19 and 20
Canmore	June 22 and 23
Rocky Mountain House	June 26
Red Deer	June 28 and 29
Hinton	July 3
Edmonton	July 5, 6 and 7
Grande Cache	July 10
Grande Prairie	July 12

At each of the hearings the session was opened with introductory remarks by the Authority. The regional planning commission, or the Provincial Planning Branch in the instance of Improvement District No. 14, was then called upon to give background to the concerns and problems of the area involved.

The Authority then heard briefs or summaries presented by concerned individuals and groups. The panel, consisting of: Dr. W.R. Trost, Chairman; P.J. Dowling, Vice-Chairman; and J.J. Kinisky, Member; questioned those persons submitting concerns in order to fully elucidate the concepts and opinions put forward by them.

Major proposals for development in the study area were presented following the general submissions. Here the opportunity was given for the developers to highlight their projects. They were then questioned by the Authority panel, then by interested persons in attendance at the hearing.

The last segment of the hearing at each location was given to open discussion, during which a free exchange of ideas and concerns took place.

A total of 308 submissions was made as well as 14 commercial recreational proposals.





**LAND USE  
and  
RESOURCE DEVELOPMENT  
in the  
EASTERN SLOPES**

**EDMONTON  
JULY 5**

**ENVIRONMENT CONSERVATION  
AUTHORITY**

**ALBERTA**



L. Cooke summarized the Provincial Planning Branch's  
Position Paper presented formally in Hinton.



## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

I was looking at your Map No. 4 showing the distribution of non-renewable resources within the foothills. What is the source of this information and how accurate is it?

MR. COOKE:

I think the information is as accurate as the transcription. The source of the information is the Department of Mines and Minerals.

MR. KINISKY:

When we talk about an integrated resource plan, how far are we with the work of the C&U committee in coming up with at least a definition of what renewable and non-renewable resources there are within the study area?

MR. COOKE:

I think we've pretty well completed the physical resource analysis for the region and we're well along the way in terms of studying some of the economic aspects and the demand for resource use in the region.

MR. KINISKY:

When we talk about the cottage developments in the Coal Branch which have been going on for many years, what suggestions does the planning branch have concerning the disposition of this type of development?

MR. COOKE:

I think the planning branch has become involved in it through its recent history. A problem arose about two or three years back with regard to land tenure in the Coal Branch. When the coal mines were operating there in the 1950s, the towns were company towns, in that the company did not only own the mine site, it also owned the land on which the town developed. With the death of the Coal Branch in 1959, two of the communities, Robb and Cadomin, remained reasonably active. These people are still operating on a lease basis and in the course of the last five years have put some pressure on the government to have their land tenure situation resolved.

Approximately two years ago a committee was set up, including Mr. Erickson of our branch, to look into land tenure in the Coal Branch, and it was at this time that the situation came to a head. The first thing they did was to find out the status of all existing buildings in the Coal Branch. It was found that virtually all of the old dwellings had been taken out under a lease of some form or another, usually not an appropriate lease for that type of development.

At that time it was recommended by the committee that tenure be granted to those living in Robb and Cadomin, but that a special type of recreation lease be set up for these dwellings. In other words, it was approved as an acceptable use for those dwellings that currently existed. Virtually nothing has been done to resolve the situation of additional pressure.

MR. KINISKY:

What sort of tenure do the people with leases in the Coal Branch have at this time?

MR. COOKE:

They have five year recreation leases. They limit the residency in a dwelling to a maximum of 120 days per annum.

MR. KINISKY:

Are these leases renewable every five years?

MR. COOKE:

Yes they are,

MR. KINISKY:

What happens if somebody now applies for a lease or a new location for a cottage?

MR. COOKE:

That is a little out of my jurisdiction. I really don't know. All the applications to date have been for dwellings that already exist.

MR. DOWLING:

You must have had some conversations with both the forestry industry and the coal industry which seem to be the most successful industries in this particular region of the Athabasca River. Is there any conflict, or have they demonstrated concern over any conflict between those two industries?

MR. COOKE:

Not between those two industries. They have certainly demonstrated that there are conflicts between their industry and other industries or recreation in the area, fish and wildlife, oil and gas industry. There has been an indication that each of them has significant resource conflicts but there hasn't really been an indication that they conflict with each other.

DR. TROST:

This is the first case in which the region on which we are focussing is an improvement district rather than in a regional planning commission's area of jurisdiction. Would you explain the difference between the improvement district and its responsibilities as against those of the Regional Planning Commission?

MR. COOKE:

The improvement district is a municipality likened unto a municipal district or a county. The difference in the improvement district is that the Minister of Municipal Affairs acts as councillor for the region. There are seven regional planning commissions in the province. All areas outside the regional planning commissions come under the jurisdiction of the Provincial Planning Branch for their planning authority.

DR. TROST:

Do the municipalities and towns within the improvement district have representation on its planning function?

MR. COOKE:

No they don't. The urban municipalities are autonomous, as they are in every case throughout the province.

DR. TROST:

So there isn't a committee, council or commission within the area of Improvement District No. 14 that encompasses Hinton, Edson and the adjacent territories through their own elected officials?

MR. COOKE:

Not for planning purposes.

DR. TROST:

Has there been a case in which an improvement district has reverted to planning commission status?

MR. COOKE:

I think you are a little confused here. An improvement district can be equated, whereas a municipality, planning commission is a group of municipalities. There are several cases in the province, particularly the areas south of Improvement District No. 14, where the IDs do participate in the regional planning commission.

DR. TROST:

We have had improvement districts with advisory committees of representatives from the towns or villages within that area. But that isn't the case in this improvement district?

MR. COOKE:

No it isn't.

DR. TROST:

Then in what way are the municipalities - Edson, Hinton and other towns that might be located in this region - involved in the planning?

MR. COOKE:

In the same way as the communities within a regional planning commission. The only real difference is that the Provincial Planning Branch acts as the planning commission for the region. In the case of the urban municipalities, the community has the option to either use the branch for its general planning within the townsite or go to a consultant.

DR. TROST:

The planning commissions decide on subdivisions. Who decides on subdivisions in the improvement district?

MR. COOKE:

All planning matters come under the jurisdiction of the Provincial Planning Branch.

DR. TROST:

So the Provincial Planning Branch decides on the subdivisions in this case?

MR. COOKE:

That is correct.

DR. TROST:

There are certain established and growing urban centres in this improvement district. Which are they?

MR. COOKE:

There are a number of urban centres, the largest being Hinton and Edson. We also have the communities of Robb and Cadomin in the Coal Branch.

DR. TROST:

Are there centres within this improvement district that have been identified as possible new growth centres for urban development?

MR. COOKE:

I would suggest that in the case of the two large communities, Hinton and Edson, while they have not been formally identified as growth centres, the attitude of the government to date has been to confine urban or built-up types of development to the existing townsite.

DR. TROST:

There are many towns in this particular ID that I suppose can be called ghost towns, or towns whose growth has been reversed. Are any of these old ghost towns in any state of preservation or could they be brought to life again?

MR. COOKE:

That's a pretty difficult question. In the 1960s many of the homes in these towns were completely torn down because of a serious problem in the Coal Branch with fires resulting from lightning strikes. Those that were in a fairly good state of repair are the ones currently being used for mountain cottages.

DR. TROST:

Which communities?

MR. COOKE:

There are several of them, Mercoal, Coal Valley, Coalspur, Sterco, Rio.

DR. TROST:

Are these all in the Coal Branch?

MR. COOKE:

Yes they are.

DR. TROST:

None of these towns have the present status of Nordegg, which is a ghost town with a new development?

MR. COOKE:

No.

DR. TROST:

With regard to establishing support facilities for developments within the Jasper National Park, are any centres beginning to appear outside of Hinton? Is Hinton itself, in the view of the improvement district, to be the centre for such support developments?

MR. COOKE:

As I said earlier, all highway and commercial developments to date have been confined to the two centres in the area, Edson and Hinton.

DR. TROST:

How far is Hinton from the border of Jasper National Park?

MR. COOKE:

Approximately 25 miles.

DR. TROST:

Is there any tendency for people to seek facilities closer to the park than that 25 miles?

MR. COOKE:

There certainly is.

DR. TROST:

Are there any facilities?

MR. COOKE:

Right now, within the last three miles from the east gate, three facilities are in existence, the Folding Mountain Tourist Centre, which is a service campground, the Circle M Guest Ranch and the Overlander Motor Lodge.



A Submission to the  
ENVIRONMENT CONSERVATION AUTHORITY  
Public Hearings on  
Land Use and Resource Development on the Eastern Slopes

by  
Luscar Ltd.  
Edmonton, Alberta

July 5th, 1973

Presented By: G.D. Coates

## CONTENTS

	<u>Page</u>
Introduction	882-3
Importance of the Coal Resource	882-4
Thermal Coal	882-4
Coking Coal	882-7
Accessibility	882-8
High Potential Coal Properties	882-9
Economic Benefits	882-12
Job-Creating Potential	882-13
Environmental Considerations	882-15
Mineable Coal: A Scarce Resource	882-17
Limited Knowledge of Coal Reserves	882-18

INTRODUCTION

As our contribution to these hearings, we would like to draw attention to some facts regarding the coal resource of the Eastern Slopes, facts essential to an objective assessment of the subject of the hearings. In the process, we hope to clear up some evident misconceptions. Our remarks will focus on the area described in the recent series of ECA publications as the "Athabasca-Yellowhead Area", that being the portion of the Eastern Slopes with which Luscar Ltd. is most closely identified, but our remarks will also apply more generally to the entire Eastern Slopes region.

Appended to this submission is a map of the Hinton-Luscar-Robb area, showing existing coal leases in which Luscar Ltd. has an interest and leases held by others. It is evident that this is a coal-intensive area. It incorporates the 'Coal Branch' which has been a major coal mining area of Alberta since the opening in 1911 of the Mountain Park mine by a predecessor company of Luscar Ltd.

It is our contention that coal mining in this area continues to warrant development priority.

IMPORTANCE OF THE COAL RESOURCE

The first major point we wish to make is that the bituminous coal resource of the Eastern Slopes constitutes one of the major energy resources of Alberta. It is a more important resource than is generally realized, warranting a place among the major assets of the Province. The energy resource base of the Province properly includes all of the following:

- petroleum
- natural gas
- oil sands
- subbituminous coal of the plains
- bituminous coal (coking and thermal) of the Eastern Slopes.

Thermal Coal.

While the present and potential economic importance of the coking coal of the region appears to have gained some public recognition, there is a misconception regarding the potential of the thermal (non-coking) bituminous coal resource. This misconception is reflected in some of the material issued in conjunction with these hearings including, for example, the following extract from the report which was issued as Information Bulletin No. 9 (page 20):

"There is presently no demand for (high volatile bituminous thermal coal) and these reserves are unlikely to be developed in

the future due to the presence of more economically retrievable deposits on the plains particularly in the Tofield area. ' 1

This assessment is erroneous. In explaining why this is so, the following comparison of the characteristics of subbituminous and bituminous thermal coals is pertinent:

	Subbituminous*	Bituminous**	
	<u>Raw</u>	<u>Raw</u>	<u>Clean</u>
Typical BTU content (BTU per pound)	7,500-8,300	10,000-10,500	11,300
Approximate moisture content: (% by weight)	26.0%	8.5%	7.5%
Approximate sulphur content:	0.4/0.5%	0.3/0.4%	0.2/0.3%
* eg. Forestburg subbituminous      ** eg. Coal Valley bituminous			

While the per-ton cost of mining the subbituminous of the plains by surface methods is less than the cost of surface mining the bituminous thermal coal of the foothills, to the consumer of thermal coal the governing consideration is not the mining cost per ton but the delivered cost per million BTU. For a thermal generating station adjacent to a mine, subbituminous is cheaper than bituminous. However, where the coal must be transported any distance by rail, the higher BTU bituminous coal soon becomes the more economical of the two fuels.

Electric generating stations in the Province of Ontario at present burn some 10,000,000 tons per year of bituminous coal imported



from the U.S. at an annual cost in excess of \$125,000,000, and these figures will increase substantially before long. Both the coal industry and the Alberta Government are endeavouring to gain access to this important potential market for the Province's coal. If this should happen - and the worsening energy dilemma in the United States provides encouragement that it will - it must be realized that the coal which will be shipped to the coal-fired generating stations of central Ontario will probably be the bituminous thermal coal of the Eastern Slopes and not the subbituminous of the plains. We emphasize this, notwithstanding that Luscar Ltd. has an even larger stake in the subbituminous and lignite of the plains.

The difference in rail costs per million BTU between subbituminous and bituminous is not the only reason for the preference for bituminous. Another major consideration is that the generating stations in which the coal would be utilized have been designed for a high-BTU bituminous coal; these stations suffer an unacceptable loss of rated generating capacity if they attempt to burn the lower BTU subbituminous of the plains.

Sulphur content is a further consideration. In areas now compelled by new air-quality standards to discontinue burning high-sulphur coal, the unusually low sulphur content of Alberta's thermal coals is highly appealing. This applies particularly to the bituminous coal, for which the sulphur content per million BTU is less than it is for the lower-BTU subbituminous coal.

Other potential markets for Alberta thermal coal include Japan and Europe. The coal involved will definitely be the bituminous thermal coal of the Eastern Slopes, not the subbituminous of the plains.

The basic point is this: measures which would result in economically viable bituminous thermal coal properties being rendered unavailable for development would be wholly inconsistent with widespread efforts being made by industry and the Provincial Government to gain access to export markets for Alberta's thermal coal, markets not only in Canada but overseas as well.

#### Coking Coal.

The resurgence which is already taking place in the coking coal sector of Alberta's coal industry has resulted from the vigorous growth of the Japanese steel industry. That growth continues, creating opportunities for further development of the Province's coking coal resource provided we can keep production costs within the limits set by international competition. In 1972, the coking coal mines of Alberta and B.C. exported 9.4 million short tons; the recent energy report by the Federal Government ("An Energy Policy for Canada, Phase I") includes these forecasts (Vol. II p. 272 and p. 266) for such mines in the two provinces:

"Further contracts with Japan will likely be signed and, in addition, it is expected that greater market diversification will be established through contracts in other countries including Europe and South

America. A reasonable expectation is that total exports will grow to about 20 million tons per annum by 1980 and to 25 million tons during the 1980's."

"The Japanese contracts now signed call for a total of approximately 14 million short tons per annum and it is hoped that this level can be reached in the mid-1970's. Currently, the total output of these mines is about 10.6 million tons per annum but growth toward the above target is under way. It is not expected that the capacity of these mountain mines will plateau at the present target of about 14 million tons and the forecast is that they can grow to a capability of 20 and perhaps to 30 million short tons per annum in the 1980's. This could arise not only from increased sales to Japan but also from diversification in other markets including the western United States, South America and Europe. Hopefully, also, some sales can be made in central Canada."

The Provincial Government is very actively promoting the development of export markets. The coking coal deposits of the Eastern Slopes are a readily exportable component of the Province's resource base.

#### Accessibility.

The coking and thermal coal deposits of the Eastern Slopes are of economic importance; those of the Athabasca-Yellowhead Area are of especial importance because of the accessibility of the area. The rail line into the Luscar mine has already been rebuilt to present day standards. The Mountain Park and Coal Valley areas could be re-opened simply by rebuilding a few miles of right-of-way which has fallen into disuse. The deposits of the Athabasca-Yellowhead Area can be developed without having to build extensive new rail lines, and there are established towns and settlements in the area.

HIGH POTENTIAL COAL PROPERTIES

The Athabasca-Yellowhead Area contains a number of proven Luscar coal properties which are on the verge of development or, in the case of the Luscar mine, already in production. This is not an area where the coal-resource potential is speculative; it is proven.

1. Luscar Mine (coking coal).

Mining operations are conducted by Cardinal River Coals Ltd. April 30, 1973 marked the completion of the first three years of a 15 year contract to supply 1.0 million long tons of coking coal annually to the Japanese steel mills. During the third contract year ended on that date, the mine achieved shipments of 100% of the contractual tonnage. Discussions are underway with the Japanese regarding a possible 50% expansion of production; there are proven mineable reserves to support such expansion.

2. Mountain Park (coking coal).

Coal was produced from this property from 1912 to 1950. A detailed - and costly - drilling program carried out over the past three years has confirmed that the property could be re-opened as a surface mining operation on approximately the same scale as the existing Luscar mine.

3. Brule (coking coal).

The deposit at Brule is the northwesterly extension of the same coal as is found at Mountain Park and Luscar. The property was mined underground for a number of years. It is not amenable to surface mining methods. The quality of the deposit and its proximity to the CNR mainline make it an early candidate for re-development after accessible surface properties elsewhere have been brought into production.

4. Coal Valley (thermal coal).

Luscar's Coal Valley property is probably the leading contender to re-establish the mining of bituminous thermal coal in the Province on a significant scale, for the following reasons:

- the quality of the deposit; it is an excellent steam coal (low sulphur; high volatile; 11,300 BTU);
- substantial reserves (sufficient for a long-term operation producing 2.0 million tons per year or more);
- the re-building of an existing ten-mile spur line would be sufficient to provide rail access;
- the deposit has already been exposed by earlier mining operations, some 10,000,000 tons having been extracted prior to 1955; bringing the mine into productive operation at this time would constitute a resumption of earlier mining operations;



- over the past three years Luscar has carried out - at a cost of hundreds of thousands of dollars - a comprehensive programme of drilling on the property, and has prepared mining plans (it will be a surface operation) and designs for a coal preparation plant, and has distributed samples to prospective customers.

The foregoing properties should definitely be in the 'high potential' category. It is puzzling - and of concern to us - that neither the Mountain Park nor the Coal Valley properties are so designated in Map 9 of Information Bulletin No. 9.

Any measures which would have the effect of blocking or inhibiting the development of such proven properties would, in our view, unfairly penalize a company which has contributed to the development of this Province for more than sixty years, and would constitute a setback to the economic aspirations of the Province as a whole.

ECONOMIC BENEFITS

The coal industry is already making an important contribution to the economic well-being of the Province, and if not artificially restrained it has the potential to make a much greater contribution in future. We assume that informed observers are prepared to accept this as a fact. It is an obvious fact to those of us in the industry who process payrolls; pay the freight bills, power bills, fuel bills; issue cheques for royalties, lease payments, municipal and other taxes; purchase equipment, supplies, services; retain consultants; etc. etc. We doubt, however, that it is fully appreciated just how far-reaching the economic benefits really are. It is particularly distressing to hear comments to the effect that "all the Province gets out of the coal industry is a royalty of 10¢ per ton"; that is simply a grossly uninformed observation.

We do not intend to take time at these hearings to expand on economic benefits which should be obvious. If the Authority wishes to have supplementary material on this subject, we will be pleased to provide it. We would also refer to the well researched and documented information on the subject which will no doubt result from the study of the coal industry being conducted concurrently by the Energy Resources Conservation Board.

JOB-CREATING POTENTIAL

The orderly expansion and development of coal mining in the Eastern Slopes region would create a great many new jobs. This point seems to be largely ignored in a period such as we are now experiencing of relatively low unemployment in the Province. However, the easy employment situation in Alberta at present should not obscure the fact that Canada as a whole has a persistent employment problem. According to the Economic Council, "Canada's rate of increase in the labour force is higher than that of any other industrialized country", and this means a continuing problem and challenge to create enough new jobs to avoid excessive unemployment. The Council has forecast that the Canadian labour force will increase by 2.6 million during the decade of the 1970's; this represents a tremendous number of new jobs to be found nationally. Even today, the employment situation is not as good in the rest of Canada as it is in Alberta. It would be shortsighted to ignore this ongoing national need for new jobs and the contribution the coal industry can make to national employment objectives.

Land-use decisions involve a trade-off or balance between economic and non-economic considerations. The relative priority placed on economic factors tends to change with the state of the economy at large, particularly the employment situation. Care must be taken, in a prosperous period such as we are currently enjoying in Alberta, not to discount the

importance of the economic facts of life. It would be presumptuous of those with jobs to advocate measures detrimental to those who lack jobs today or who could be without them in future. It would be equally presumptuous of those who mistakenly believe their source of livelihood is somehow quite independent of the producing elements of our provincial economy to insist upon a course of action detrimental to that economy, without which Alberta could not support anything like the population it has today.

It might be noted also that it is evidently an objective of the Provincial Government to disperse development throughout the Province, rather than further concentrate it in the major urban centers. Expansion of the coal industry of the Eastern Slopes would contribute to the attainment of this objective.

ENVIRONMENTAL CONSIDERATIONS

In our view, it need not even be an issue at these hearings whether development of the coal reserves of the Eastern Slopes would entail unacceptable environmental disturbance, considering the extensive and comprehensive legislation and regulations - much of it new - now facing the industry and the provisions which have been made for effective enforcement. It should be obvious from this legislation that a coal property in future will have to satisfy tough environmental standards or remain undeveloped. The regulatory provisions we refer to include the following; the list covers only the highlights and is by no means complete:

1. The Land Surface Conservation and Reclamation Act of May, 1973 (Bill 47) provides for:
  - creation of a 'Land Conservation and Reclamation Council' to administer the legislation and regulations;
  - a new operation involving surface disturbance may not commence until an 'approval' has been obtained under the provisions of this Act;
  - no surface lease may be surrendered until a reclamation certificate has been issued.
2. A permit must be obtained from the Energy Resources Conservation Board to develop a mine to the stage of commercial production.



3. A license must be obtained from the Energy Resources Conservation Board to commence commercial mining operations or expand an existing mine.
4. An approval must be obtained from the Energy Resources Conservation Board to start-up, modify or abandon a coal processing plant.
5. The filing of an acceptable Environmental Impact Statement will in future be a prerequisite to obtaining permission to develop a coal property; this statement must include plans to prevent or remedy environmental damage.
6. Coal exploration cannot be undertaken in the mountains and foothills without the permission, in advance, of the Department of Lands and Forests, which also inspects the site upon completion of the exploration project; a permit from the Energy Resources Conservation Board is also required for any exploration excavations.

We doubt that it is generally realized to what extent the exploration and mining operations of the coal industry in Alberta are now subject to exhaustive review and control by a complex of legislation, regulations, and enforcement agencies. There is no risk of uncontrolled activities by the coal industry in the Eastern Slope region.

MINEABLE COAL: A SCARCE RESOURCE

It would be a mistake to assume that the mineable coal deposits of the Eastern Slopes are plentiful. The fact is that, while coal-bearing formations occur extensively throughout the region, coal deposits economically recoverable (whether by surface or underground methods) are few and far between - so much so, in fact, that an economically mineable deposit should be considered a scarce resource of great value.

In this connection, we disagree with the implications of the following statement contained in Information Bulletin No. 2 (p. 23):

"It is most important to recognize that the occurrence of coal is continuous throughout most of the foothills zone and that the total extraction of the resource could destroy some of the finest wilderness to be found on this planet."

Mineable coal, far from occurring in continuous fashion, is to be found only very sporadically. The picture which this statement conjures of the possibility of a continuous mining operation from one end of the Eastern Slopes to the other is completely out of touch with reality.

Where a possible mining development is in short-term conflict with alternative land-uses (and in the mining context it can only be short term), mining should not be relegated to a lower priority in the mistaken belief that the coal industry can easily substitute some other property.

LIMITED KNOWLEDGE OF COAL RESERVES

In the course of producing a land-use plan for the Eastern Slopes, it would be a mistake to assume that all the potentially recoverable coal of the region has been identified and catalogued or is already under lease. This is not the case for the following reasons:

1. Geologically, it is an extremely complex region. In other regions where coal occurrences are more regular and predictable, superficial reconnaissance and widespread drilling is sufficient to establish the existence of mineable coal. This is not at all the case in the massively distorted and displaced coal formations of the mountains and foothills. The region has not been thoroughly examined for coal by any means. In our opinion, there is considerably more coal to be found in the region (although how mineable it may be under today's economics and technology remains to be seen). On the other hand, it is to be expected that some existing leases will prove unsuitable for development, and will ultimately be abandoned by the lessees. The existence, today, of a coal lease is therefore an indicator of only limited value as to the real extent and location of coal which can ultimately be recovered.
2. Economic parameters are constantly changing. This applies to the size and capability of equipment; mining technology; mining costs;

and selling prices. Such changes have the effect of bringing into the economically recoverable category deposits previously considered uneconomic and unrecoverable. We cannot, today, define what will be economic in years to come.

Accordingly, we strongly recommend that any land-use plans formulated at this time should not be regarded as fixed for all time. Circumstances can be expected to change considerably as regards coal - and other factors as well - and it is most important to build a considerable degree of flexibility into the planning process. Hopefully, the planning will be treated as an ongoing process, not a one-time exercise.

We also recommend that exploration for coal should be allowed to continue - subject to appropriate environmental safeguards. Sensible land-use planning must be based on an accurate resource inventory; that inventory, in the case of coal, is still far from complete and knowledge of it can be extended only by continuation of exploration activity.

---

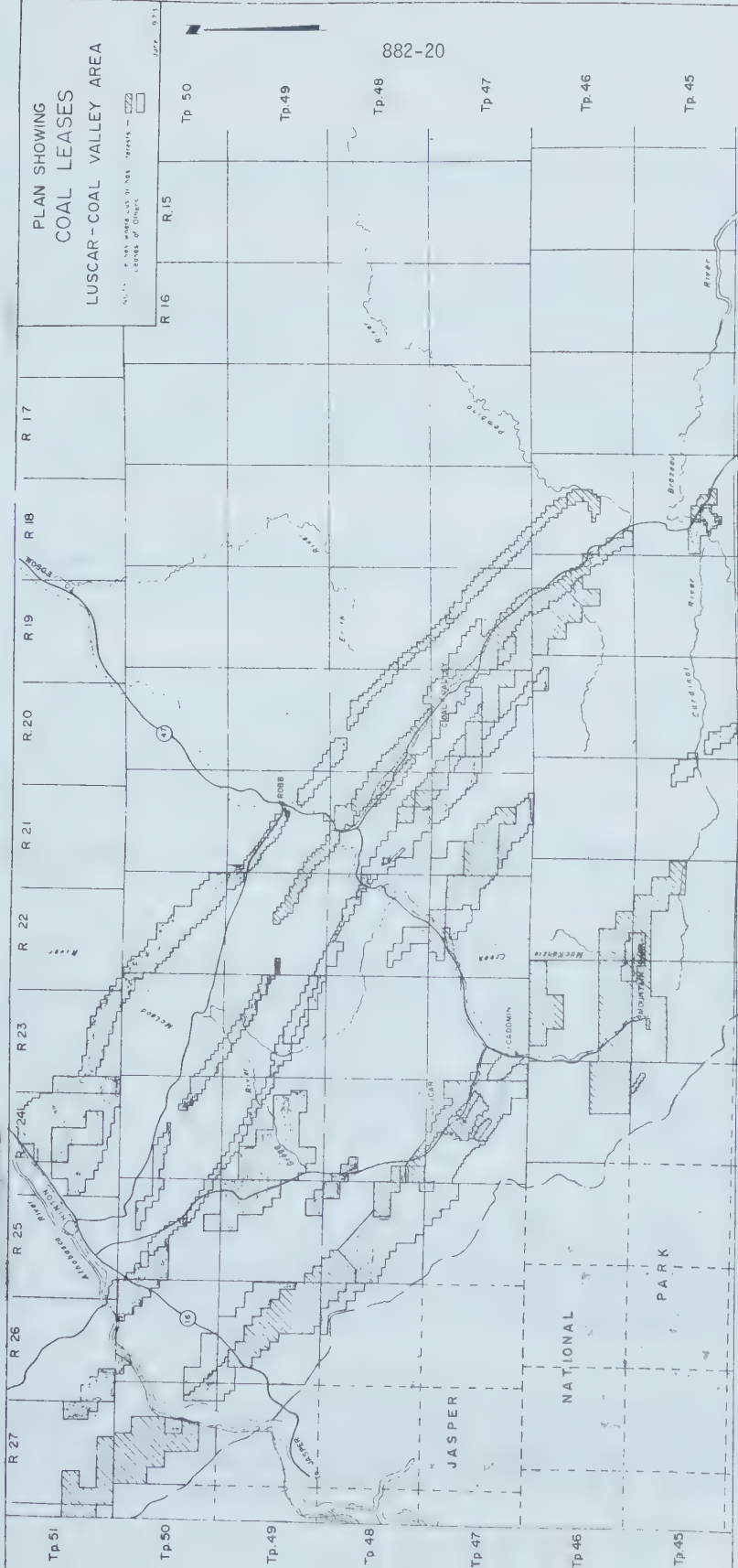
This concludes our submission. We have appreciated the opportunity to offer comments on this important topic, and trust that the information we have provided will be of assistance to the Authority and all interested parties.

PLAN SHOWING  
COAL LEASES  
LUSCAR-COAL VALLEY AREA

NOTES: 1. LANDS OWNED BY THE GOVERNMENT OF CANADA ARE SHOWN WITH A HATCHED PATTERN.  
2. LANDS OWNED BY OTHERS ARE SHOWN WITH A DOTTED PATTERN.

1000' 0.711

882-20





## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

In many previous submissions from the coal operators of the province we've been told that varying percentages of coal deposits are recoverable. What are the best recoveries taking place right now?

MR. COATES:

On a surface operation, with the type of deposits such as we have at Cardinal River, we count on recovering 90 per cent of the coal in place that we expose. We would be very upset if we didn't get 90 per cent of it into our cleaning plant. There is a cleaning plant loss, of course, as we bring the coal up to the required standard.

MR. KINISKY:

I understand that in some operations recovery is as low as 40 and 50 per cent.

MR. COATES:

This is a function of the property. These recoveries are not out of line in the case of an underground property. For a surface property they are, in my experience, much too low to be acceptable.

MR. KINISKY:

Some of these rather low recoveries may be caused by technical problems and the geological formations themselves. Because of the predictions of world energy needs in the future, wouldn't it be wise to leave some of these in place until such time as we are able technologically to retrieve a higher percentage of what is there?

MR. COATES:

I don't presume to speak about underground operations as my expertise is more in the surface area. But in the surface operations it's not entirely a question of extraction technique; it's largely a function of the characteristics of the seam itself. A coal seam is not of uniform quality from one side to the other. We run into the problem of, at what point are we removing black garbage? The cross section across the seam may vary considerably, so there comes a time when, although it's black, the appropriate thing to do is leave it behind. It's not worth removing under any economics.

MR. KINISKY:

We have been told previously in these hearings that there has been a pretty good examination of the eastern slopes and that a much smaller amount of coal is available than we had thought. Now you tell us it is the other way around, that we haven't found all the coal available in the eastern slopes. I think we require a resolution of that difference of opinion.

MR. COATES:

I know this is an argument one hears, not only about the eastern slopes but about the whole province. I'm in the coal business, I'm not persuaded. I have evidence from our own experience that we're still finding coal. There are still areas we haven't even looked at exhaustively, particularly in the eastern slopes. With this tortured

geology one has to use a magnifying glass. There is no substitute for careful field reconnaissance and examination. I'll be most surprised if more deposits are not found in time.

MR. KINISKY:

Regarding revegetation, we have had an opportunity to look at some of the reclamation projects and they appear extremely interesting because they are relatively new. But one thing that interests us particularly is the fact that no organic materials seem to be available at the surface. The grasses look lush. What happens when we get to that time when the fertilizers which are put in at the time of seeding disappear? You've got no organics; you've got no way of generating available nitrogen. What happens to the plant structures at that time?

MR. COATES:

You are out of my area of expertise. All I can say is that the knowledgeable people who have looked at it are most encouraged by the process taking place, the extent to which our seeding operations are successful, the regenerative effect of that vegetation on the soil itself, and so on.

MR. KINISKY:

Your Coal Valley properties, as outlined in your brief, happen to be in direct conflict with a pretty prime ungulate range in that particular region. It makes quite a difference in our judgment as to how effective reclamation will be.

MR. COATES:

I think you've seen what we've done at much higher elevations at Cardinal River Coals. We have every reason to believe that the reclamation process will not be as difficult at the lower elevation at Coal Valley. If we can be successful at Cardinal River, there is no doubt in my mind that we can be successful at the lower elevations.

When we started reclamation at Cardinal River we were specifically asked not to plant trees. We were asked to use grass to provide pasture. Perhaps the same arguments will apply in the ungulate range of Coal Valley.

MR. KINISKY:

If you proceed with the developments which you say you are very close to starting, does your company propose to use the facilities available in the established towns such as Hinton, rather than to establish new communities in the area?

MR. COATES:

This would certainly be our preference. There is no question that the experience we've had with our labour force based in Hinton has been very successful, a happy one for all concerned. It is certainly the one we would prefer.

MR. DOWLING:

I'd like to talk to you for a moment about the markets. There is a market for coking coal in eastern Canada. Some of that market is apparently being filled out of the country and the balance from inside

the country. How much of the internal coking coal market is being supplied from outside Canada?

MR. COATES:

One hundred per cent. Ignoring the relatively small tonnages in the Sydney operation, the steel companies of Ontario consume somewhere between seven and eight million tons of coking coal a year. One hundred per cent of that is imported from mines in the United States at an annual cost to the Canadian economy of something in the order of \$130 to \$140 million a year. I am aware there is much talk of moving our coal back there, and there have been some shipments. Personally I hope we can find the way to do it. At the moment the barrier is the very high rail transportation costs from western Canada.

MR. DOWLING:

Freight rates seem to be bothering a lot of industries in western Canada at present. We know the provincial government is making some efforts to correct the situation. What kind of efforts are being made either by your company or your industry to correct the freight rate problem?

MR. COATES:

You've opened up a very complex and very troublesome subject, not only to our industry but to our entire western economy. One of the problems is the fact that the individual shipper has very little negotiating strength. Bear in mind that an individual mine is captive to one mode of transportation, one railroad. I think, personally, there is a great need for a mechanism for strengthening that negotiating leverage.

MR. DOWLING:

Would your company's normal channel to promote a correction in the freight rates be through the Coal Association of Canada? Does the Coal Association of Canada have a position with regard to freight rates, and does it make representations to the federal government?

MR. COATES:

When the industry operates collectively it is through the Coal Association. When we come to a specific property, a specific mine, a specific customer - bear in mind this is a very competitive industry - the individual company deals with the railway.

MR. DOWLING:

I'm not quite sure what position of investigation you have reached with the specific mine properties listed in your brief, Luscar, Mountain Park, Brule and Coal Valley. Could you elaborate on that?

MR. COATES:

The Cardinal River mine at Luscar is an active mine. We have examined it in detail and are in the course of discussions regarding expansion. We have our plans. We know it can be done. It's a question of commercial negotiation at this stage.

Mountain Park has not reached the stage of commercial negotiation. Quite frankly our policy is not to bite off more than we can chew. We want this Cardinal River property to be functioning

smoothly. I might say we take some pride in the fact that in the last contract year we supplied 100 per cent of our contractual commitments. I think it is a performance that the western Canadian industry needs. Our first priority is the Luscar mine. Some time after that the Mountain Park property will certainly be considered. In the meantime we've carried out the necessary field work to permit us to get on with more detailed planning.

The planning for the Coal Valley property is further ahead. We have done our field and office work in the sense of technical planning. We are approaching potential customers and distributing samples.

MR. DOWLING:

One of the questions that has been raised on a number of occasions concerns the amount of public investment required when a mine goes ahead. Obviously there is large capital investment on the part of the mining company itself. But what sort of investment by way of access roads, railways, townsites and so on is required on the part of the public purse to get that industry under way?

MR. COATES:

Our intention is to do it ourselves as a private enterprise. We are not looking for subsidies, for handouts or assistance. The Cardinal River property was brought into production without public assistance, with the exception of the access road past Cardinal and over to Cadomin which was built by the provincial government with a contribution from us. Of course it does serve as a much used public road. The railway cost is built into our freight rates and the rest of it is done with our own capital.

MR. DOWLING:

If the mines go ahead what would you do for a labour force for these open pit mines? Would you be able to use local people or would you have to import expertise from other areas?

MR. COATES:

Our preference is to employ local people. I use that in the broadest sense. We're not going to find that many available people in a town like Hinton. People are attracted there because they have jobs, but they are local in the sense of Albertans generally. This is quite different from underground property where one has to have trained miners, a period of apprenticeship, this sort of thing. We draw on people with heavy equipment and construction backgrounds.

We also draw on the other mines. I don't mean in the sense of poaching, but a work force rotates among the mines in Alberta and British Columbia. Our biggest component is people driving the large trucks, the 100 and 120 ton haulers. We can take people with farm backgrounds. It does involve safety training, of course, but they adapt readily to that kind of work. We are using 15 yard electric shovels or drag lines. People with a heavy construction background are quite at home in this. We need welders, a common trade. We need electricians; we need heavy duty mechanics. We're drawing on an existing pool of skills that are widely used in a number of industries.

MR. DOWLING:

You say that economic parameters are changing and you suggest there be a flexible plan. Are you suggesting that mines which are exploited at present may possibly be reworked in the future?

MR. COATES:

I was thinking more in terms of a property that we could look at and say, we can't produce coal and sell it. The production costs would in effect exceed today's market price. Bear in mind that these are very competitive markets. In the case of steam coal we're dealing in fuels, the energy market. In the case of coking coal we're dealing in an international market. We're in competition with Australia, the eastern United States, Poland, Russia, South Africa. We don't set our price. A price is set and we look at a property and decide whether we can live with the prevailing price.

I would hate to see only one analysis made, looking at a particular property and saying, that's submarginal today, therefore it is unavailable for all time. Conditions will change. I would like to see a periodic review of that property so one can say that today it is no longer submarginal but viable. There is a hierarchy of properties, an order in which they will be developed. The most economic will be developed first.

MR. DOWLING:

During these hearings there has been an extensive expression of opinion, especially from the environmental group which seems to have taken the position that they don't want to see any open pit mining whatever. They are particularly concerned with the impact of open pit mining on large herds of wildlife. What position does your company take?

MR. COATES:

I don't think it's a question of opposition. We are in a game zone at Cardinal River and we're not aware that the game has been particularly put off by our presence. In fact we find game wandering around on the property. We periodically have to rescue deer from the ice. The sheep come down. The animals don't seem to be dismayed. If they are, maybe they don't come down into the pit. Our operations are not all that extensive in a mine. They tend to be very highly localized.

DR. TROST:

The Land Surface Conservation and Reclamation Act received third reading and was proclaimed by cabinet yesterday. The Coal Conservation Act has also had first reading. Do you feel that your company can live with these acts and their regulations?



MR. COATES:

Quite frankly, we welcome them. I say that sincerely. In the coal industry the circumstances are very different. Mr. Cooke used an expression I liked very much when he talked about the new era in resource management and development. I think that is a very sensible statement.

We have been much abused and maligned because of conditions following circumstances in the 1930s, 1940s and even the 1950s. We don't condone those conditions and the state in which the industry was left. As a matter of fact, we have cause to regret it more than most. I'm relatively new to the industry. There are many of my breed. We do not defend the actions of the industry of a different era any more than we would defend some of the actions of society in the 1930s, 1940s and 1950s.

It's a new era to be sure, and one that requires constructive legislation of the type that has come out of the hearings and the legislative process over the last two years. I'm delighted to see the ground rules established although there are still areas to be developed. But this is a prerequisite to a logical sensible economic development of our industry. I think the stage is being set; I welcome it.

DR. TROST:

The terms of reference for these hearings are in essence different from the preceding ones. Here we're dealing with land use and resource development in the eastern slopes, and so our concern is with alternate land uses and how they may impinge on each other.

Is the eastern slopes coal mainly shipped to an export market?

MR. COATES:

Yes. I wouldn't rule out the possibility of internal use within the province. As one of the papers pointed out, the sub-bituminuous coal of the plains, if it doesn't have to be transported, certainly has a cost advantage.

DR. TROST:

If we were to develop a steel industry in the province, then we might use some of the eastern slopes coal for chemical purposes?

MR. COATES:

As far as the steel industry is involved, it has to be the coking coal of the eastern slopes.

DR. TROST:

When we were last dealing with surface mining the export market was in one phase. Since then it has gone through more than one phase. Are you concerned about the stability of the export market?

MR. COATES:

No, in the sense that I think we've all been exposed to a great deal about the underlying energy situation in the world at large. One of our problems is that the development of our coal resource in Alberta generally, and I'm not talking about the eastern slopes, hasn't kept pace. I think, of the steam coal burned in North America

today, that the mines of Alberta produce on the order of one to two per cent. This suggests to me a resource whose development has lagged.

We can see the dislocations that are taking place in natural gas. In the United States whole industries have been turned off natural gas. People don't know whether they can operate this winter because the natural gas won't be available. They have turned to oil and we all know the international ramifications of oil.

It seems clear to me that coal must play a more dominant role in this basic energy need. This is not a temporary situation. The energy situation is here to stay. I think coal has the most potential.

Furthermore, our Alberta coal, with its low sulphur content, is a much sought-after commodity. Our major bottleneck is the transportation problem. But the low sulphur is a very important consideration.

Our coals can be blended with other indigenous coals of a higher sulphur content. The blend, of course, having the average sulphur, permits other coal to be used. This would apply, for example, in the case of Japan. The only thing that prevents our steam coal going to Japan is an embargo which the Japanese government placed several years ago to protect an ailing domestic coal industry, an embargo which I would contend has outlived its usefulness. As far as a fuel is concerned, our coal would fit in very well for their domestic needs.

DR. TROST:

Changes outside your control, like the changes in the currency exchange rates, can have an effect on your profitability, can they not?

MR. COATES:

So far they have greatly helped our competitiveness. As an exporting country our dollar has gone down with the American dollar. In relation to currencies, I think a German mark today buys 22 per cent more tonnage than it did two years ago. Maybe that's the yen; maybe it's only 18 per cent for the mark, but these changes have been of the order of magnitude of 14, 18, 22 per cent.

DR. TROST:

The way the currency rates have been going they have improved your market, but if they go the other way what will happen to you?

MR. COATES:

Well once we get the market we would protect ourselves against currency fluctuation.

DR. TROST:

Can you do this by contractual arrangements?

MR. COATES:

It is possible.

DR. TROST:

Are they being written in those terms now, or can they be?

MR. COATES:

I would not take a contract without currency protection. The situation is entirely too volatile.

DR. TROST:

But this kind of factor would be of general concern?

MR. COATES:

It is one of the difficulties in negotiating a long-term export contract.

DR. TROST:

Turning to transportation or costs of that sort which, for a land-locked mine, are of course substantial, particularly when your markets are so far away, are alternatives to rail transport being considered by your company? I am thinking of pipelining on the one hand and gasification on the other, if it's applicable to mountain coal.

MR. COATES:

We're following these developments with a great deal of interest. The rail transportation system is there, particularly when we're talking about the Athabasca-Yellowhead area. Coal and oil, coal and water are all there and are extremely interesting. Not all the logistical, technical and commercial problems have been resolved. But the rail is there and it's operating, particularly westbound. Once we get to the coast we can move our Alberta coal a long way. We can move our coal to Japan for less than it costs to move it into central Alberta by rail, bulk terminal and laker.

DR. TROST:

How much per ton does it cost you to move it to the coast?

MR. COATES:

It varies depending on where the contract was negotiated and so on, but the prevailing rates are in the range of approximately \$4 to \$5 per short ton.

DR. TROST:

So this is about one-quarter of the value of your coal at the dock?

MR. COATES:

Yes. More, of course, in the case of steam coal.

DR. TROST:

We have been told by coal operators on more than one occasion that only one coal company operating in the mountains was making a profit right now, and they indicated it was your company. Is that true?

MR. COATES:

Do we have a fifth amendment here?

DR. TROST:

They were complimenting you, whoever was saying it. But I come to the general question of the profitability of the enterprise under present circumstances.

MR. COATES:

As someone who is about to sit across the table from the Japanese in Tokyo I'd just as soon not commit myself. We're all aware of the publicity; we're all aware of the commercial difficulties that others have experienced. Our approach, as I mentioned earlier, has been to start relatively small with a manageable size of operation. We have had some problems but we feel the operation is under control.

DR. TROST:

The basis of these hearings is the question of conflicts, if there are any, between different ways of using the eastern slopes. There are, of course, certain conflicts between the development of the resources themselves, but I'm more interested in getting your reaction as to whether or not there is a conflict between the development of the coal resource and the development of the tourist industry?

MR. COATES:

Given a specific mining property I don't rule out the possibility of direct conflict. I am thinking in terms of specific mining properties which in area or extent are not large at any one time of development.

At the same time, with buffer zones and just the difference in location in that rolling country and so on, I think the two can co-exist. Certainly the access roads are being much used by people who want to get into the adjacent recreation areas. I can't see that our presence has inhibited people from using those recreational areas.

DR. TROST:

If a particular location was a good coal mining location and also a good site for a tourist development, how would you suggest a choice be made between the use that those two sites could be put to if there were a conflict, as I suspect there would be?

MR. COATES:

The decision would hinge on the availability of alternatives. My view of the coal properties and their economics in that very difficult mining area is such that if we have an economically viable property, and there are not many of them, it would be a loss of a scarce resource to turn it over to an alternate use. It's risky to generalize but I believe there are far more alternative recreational sites than there are economically viable mining properties.

DR. TROST:

Would the possibility of staging the development of the mining sites exist?

MR. COATES:

Yes, but please bear in mind that mining use is short-term. I'm always struck by the fact that in the logging industry, for example, the public seems to be quite prepared to give them a time span of 15, 20 years to move in, harvest and regenerate, and yet there seems to be an expectation that we should tidy up our site overnight. It is a long time span but it's not in perpetuity. The mining use, on the scale that it is being done today, is not a perpetual use.

DR. TROST:

Both the tourist and forest industries can be placed on a sustained yield basis, a self-perpetuating basis, so they don't use up their resource. A sustained yield basis for a mine of a non-renewable resource isn't a credible concept, but control of the rate of use of the resource, nevertheless, would be attainable. Do you feel that that might be useful? It would, of course, involve a certain amount of cooperation of all the operators in the province.

MR. COATES:

I think there are economic considerations here that will automatically pace the development. The operators generally are not going into an area to mine 100 million tons of coal one year and abandon it the next. The markets don't evolve quite that fast. There is also the question of what is the optimal size of a mine to manage so there is economic pacing.

DR. TROST:

Boom and bust has been one of the problems in the past, hasn't it?

MR. COATES:

Quite so, but again bear in mind the economic structure of the industry. While there were larger operations, there were also an awful lot of gopher holes. People had an outcrop, picked up a relatively few acres of lease, punched in a few holes and high-graded the property. The proportion of coal taken out in those days was very low. They just went in and handpicked it. This, I think, was a very unfortunate development of a resource.

DR. TROST:

Of the four priority or high potential sites you have suggested, do you feel that all of them can be developed with the townsite located in the Hinton area?

MR. COATES:

This is a difficult question and I have no definitive answer to it. We, at this stage, have to be very flexible in our own planning, trying to see what emerges in the area, trying to establish how the markets develop and what the scale of operation will ultimately be. It's conceivable that in an operation like Coal Valley we would open up in a small way initially. It might be larger. I don't know.

DR. TROST:

How far are these sites from Hinton?

MR. COATES:

Coal Valley is 10 miles south of Coalspur, about 50 miles from Hinton.

DR. TROST:

Which is quite a stretch for commuting.

MR. COATES:

It is, yes. We're encouraged by the calibre of Highway No. 47 that is going in. It is going to be a fine road and will give another access to the area.



WHY WILDERNESS

Wilderness, its enduring spirit cannot fail to thrill us. Our Canadian identity has been molded by this grand force. Our history was shaped by the qualities of a wild and powerful land. This heritage of wildness, this opportunity to experience nature's frontier, has given us a strength of character for which other nations, long ago having destroyed their own wild areas, can now only yearn.

Wilderness is a part of us, it is in our blood, we must not lose it. Should it be allowed to slip away we will have destroyed something more sacred to us than perhaps we now can realize.

Walk the wilderness and learn its charm. Find the solitude of an alpine ridge, feel the breeze washing cool air past your skin. Watch the harmony of nature's world in balance, unspoiled, moving on in silent patterns: mountain goats scrambling along the sky's edge; an eagle plunging toward its prey; forests marching up the steep slopes, in dense formations; clouds drifting.

Wilderness, a sense of time without time. Mountains, upthrust by ancient forces slowly decay from the action of ice. Yet they seem eternal. To mortal man, Time is irrelevant here. Within those who have known wilderness there exists a desire to protect this land, to pass it on unspoiled to future generations. By this action, another age of children may also gaze upon the primitive landscape, and themselves find a new meaning to life.

Wilderness is that part of the earth where nature, and not man, sets the rules. In a world so carried away upon the concrete, neon and plastic life, there is urgent need to protect our wildlands from man's seemingly inherent desire to develop and change.

With nature in charge, man's life style must necessarily be primitive. Motorized equipment, vehicles, resource uses which produce a marked impact on the landscape, all are out of place. To allow commercial forest operations, strip mining, permanent settlements, or motorized access in an area dedicated as "wild land" would totally alter its character.

Uses which do not appreciably affect a region's wild character can often be permitted in a wilderness. Watershed management (without permanent structures), primitive recreation, management of the fish and wildlife resource, all are examples of man's uses which can be compatible with wilderness dedicated for recreational purposes.

Wilderness can be preserved for scientific use or for primitive recreation purposes, or both. In Alberta, the Wilderness Areas Act has created the means by which ecological reserves or benchmark wilderness may be dedicated. Already three areas, the Siffleur, Ghost and the White Goat (reduced in size from original area) have been set aside under the new Act. This legislation is far sighted and it is hoped that other key wilderness areas will be reserved under it, especially on lands outside the Rockies in Alberta's north, or on the Plains.

Yet what Alberta presently lacks are laws by which other wilderness areas may be set aside for primitive recreational purposes. The present Wilderness Areas Act, in seeking to ensure absolute ecological protection, outlaws hunting and fishing, horseback travel and even berry picking. Obviously, although fine for scientific purposes, such restrictions do not provide adequately for primitive recreation. In fact, all the activities prohibited in the above-mentioned Act can be considered valid primitive recreation uses for our back country wildlands, so long as they are properly managed.

Alberta must provide a system of recreational wildernesses (which allow horse travel, hunting, fishing, etc.) as well as an ecological reserves program. This province could therefore follow the lead set by British Columbia which provides for both types of wild reserves

To re-create oneself in wilderness, to live by the rules of Nature, sometimes by living off the land, a person may often gain a better understanding of what is meant by ecology, e.g., the role of the organism in relation to its environment. A new sensitivity for the world around one, a new set of environmental attitudes may be acquired, attitudes of the type which are so necessary in today's society.

East Slope .... that special place of Alberta where the Rockies first rise from the plains; this front wall of the mountains is the province's most distinctive area. The East Slopes lie adjacent to Alberta's main population corridor (which stretches from Edmonton to Lethbridge) in which 75% of Albertans live. As such, it will be intensively used in the future, even more so than today, by city people seeking revitalization in wild country.

Although the average Albertan would often like to believe that his East Slope was still untouched, most of the area has already been changed. In many places exploration roads, oil and gas wells, pipelines, strip mines and forest operations scar the land.

Roads penetrate the majority of the region. Now certainly many recreationists (car campers, snowmobilers, etc.) desire these access routes to allow them to enjoy their form of relaxation. Yet considering the present extent of roads in the East Slope, the wilderness enthusiast, whose recreational desires are every bit as valid as those of the motorized recreationist, is dismayed to see the remaining zones of our once extensive wilderness shrinking so rapidly. As a result, he pleads for retention of the last key wild regions, now, while the opportunity still exists.

This book describes nine primitive wilderness regions on the East Slope which should be set aside now from further development. These are the Wildlands for Recreation, those few remaining natural land areas which can ensure that Albertans never lose their opportunity to experience and understand the type of wild frontier that was instrumental in shaping the Canadian heritage.

In describing each of the nine proposed recreational wilderness areas the emphasis is placed on familiarizing the reader with not only specific recreational aspects (in the hope that he may have the opportunity or desire to visit them)

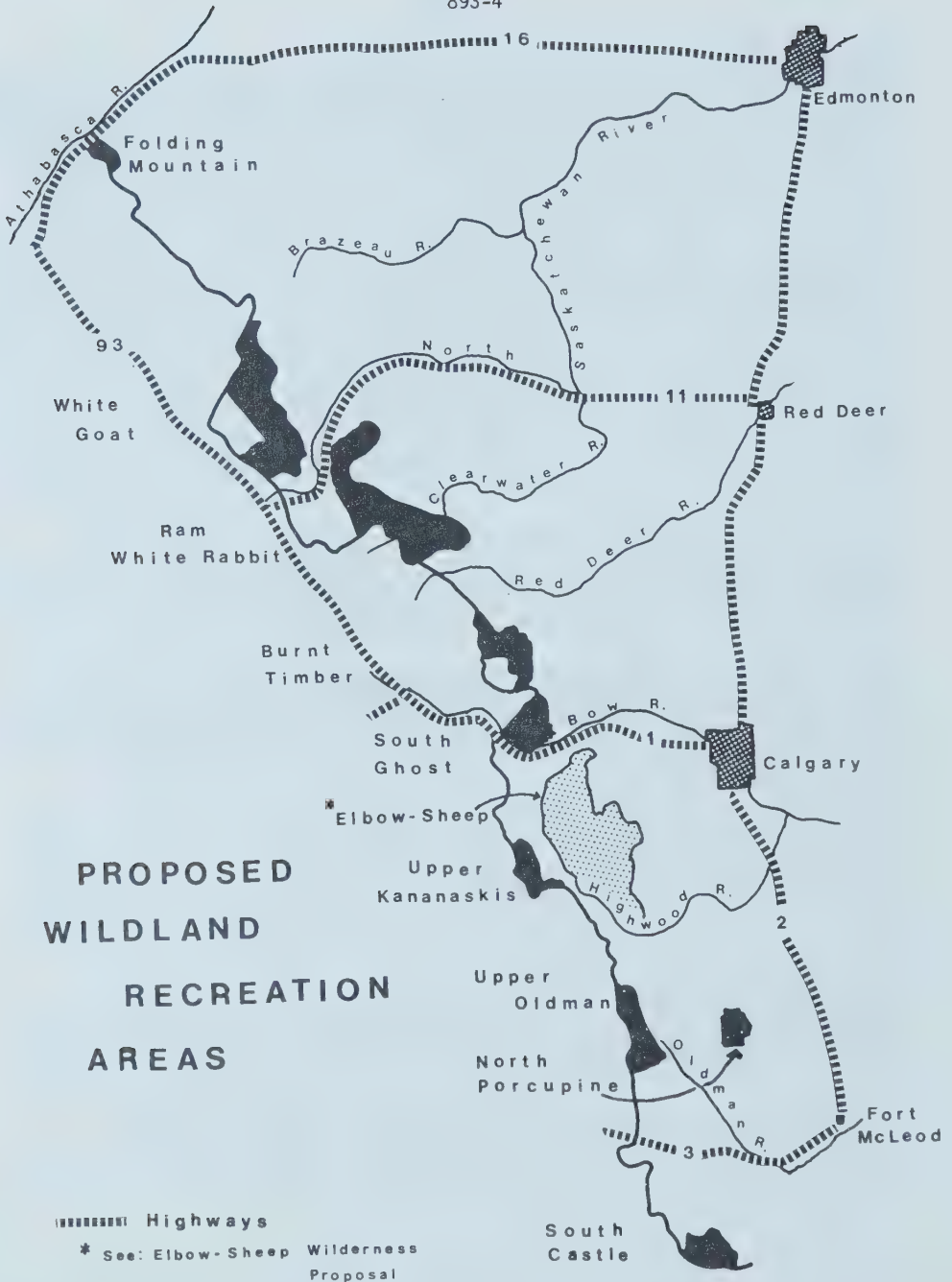
but also some of the resource conflicts that exist with other non-wilderness uses. It is simply not good enough in this day and age, when so many demands are being placed on the land, and when environmentally-conscious members of the public are being condemned by some resource users as emotional and narrow-minded, to suggest that areas such as these should be preserved without explaining not only their benefits, but also the costs that such preservation would represent to society.

Unfortunately, we cannot adequately discuss in this book the economic consequences (pro and con) of classification of each of these East Slope lands for Wilderness recreation. But this can and should be done, and we would request that our elected representatives ensure that each proposed area be the subject of a thorough examination by land resource managers, economists, biologists, and other appropriate professionals. In such an analysis all of the costs (including reclamation and social costs) and benefits of alternative resource use must be considered. As well, certain positive economic benefits of "recreational wilderness" classification, such as income from guiding and outfitting (summer as well as fall), increased tourism potential, trapping, etc., should be used when discussing "loss of jobs" created by withdrawing timber, or mineral potential from exploitation. Of utmost importance of course is the preservation of critical wildlife habitat. And finally a correct analysis of the true role of "subsidy" by the taxpayer in many extractive operations must be made when examining alternative uses.

After weighing all of these factors we believe that an objective decision will be more easily reached. Thus knowing the facts the public will feel confident that even if an area is not set aside for wildland recreation purposes, that this negative decision was based on fact, and that these facts showed a necessary and compelling need for the alternative resource use.

The nine areas put forward herein all qualify as wilderness. It is believed that their wildland recreation potential far outweighs the potential of other resource uses. We should emphasize that when drawing boundaries for the areas every effort was made to include only prime wildland recreation lands, and exclude areas of marginal value and, in many cases, sites of high mineral or timber resource potential.

893-4



## EAST SLOPE - ORIENTATION

In view of the extensive resource development on the East Slope today, only limited areas remain which qualify for wilderness protection. Nine of these are discussed within this study: South Castle; Upper Old Man; North Porcupines; Upper Kananaskis; South Ghost; Burnt Timber-Waiparous; Ram-White Rabbit; White Goat; Folding Mountain. All but one of the proposed areas are located in the high remote headwaters region of the East Slope. That's how far back our wild frontier has been pushed. Any delay in protection for these last wild areas may seal their fate, for wilderness can only lose the battle once.

## WATERSHED PROTECTION

This high country of the east slopes has long been considered to have its primary or best use in producing a continued flow of clean water. In fact, the Eastern Rockies Conservation Board was set up in 1948 to ensure that the watershed potential of these high elevation lands was not allowed to deteriorate. For the water that is gathered on the East Slope is important not only to Albertans, but to residents of Saskatchewan and Manitoba as well. Recognizing then, that watershed protection is the highest priority use of the East Slopes, then a recreational wilderness status for certain of the remaining high elevation watersheds will only help to assure that the quality of this resource never deteriorates.



Three Isle Lake

R. P. Pharis



## CLIMATE

The East Slope is ideally suited for recreation. Along the front ranges, precipitation is considerably reduced (in comparison with areas further west) as a result of being located in the lee or rain shadow zone of the Rockies. Thus the East Slope receives less rain in the summer and has fewer fogged in and cloudy days. During the winter snowfall is less and, because of the warm chinook winds, the snowpack disappears quite early in the spring. Thus, the area is open longer for summer-type recreation use.

## VEGETATION

Generally speaking, the eastern slope is covered in relatively dense stands of white (up to 5,000') and Engelmann spruce (above 5,000'). To the casual observer the two spruces are difficult to tell apart for they look quite similar.

A spruce forest is a climax forest. It is the final and stable stage to which the natural forest vegetation on the East Slope progresses. However, as will be mentioned in the Burnt Timber section, fire plays a key role in the East Slope forests. After a fire, the first evergreen trees to reseed are lodgepole pine, not spruce. The tightly sealed seed cone of this pine is designed to withstand the high temperatures of fire. In fact, the heat of a fire will cause lodgepole cones to open sooner than they normally would, allowing seeds to be shed shortly after the fire onto the open mineral soil. Many of the forests on the East Slope, therefore, are fire forests - lodgepole pine.

The pine forests will not remain "forever". Eventually the seedlings of spruce, which are tolerant of the shade of the lodgepole forest, will overtake the pine. Finally, the older pine die and young pines are not produced because of their intolerance to the dense shade of the spruce forest. The forest will now have reached its climax; the process, a lengthy one, sometimes takes 300 years from start to finish. Without fire, the spruce climax is self-sustaining, younger saplings taking the place of older trees as they senesce and are windthrown and die of insects or fungus disease.

A mature spruce is a dark forest - little light passes through to the ground. Thus, light undergrowth results, making hiking and horse travel relatively easy. The young lodgepole forest, on the other hand, is often quite dense. The trees may only be separated by inches and densities of several thousand trees per acre are common. Passage through this forest is difficult and frustrating. It's best to try and travel around young lodgepole stands. Mature lodgepole stands have thinned themselves, the weaker trees dying from competition. By the time the lodgepole forest reaches maturity, the remaining trees are well spaced and travel is easy.

On the floor of spruce-pine forests the following plants can be found: common juniper; wild rose; white meadow sweet; bush honeysuckle; tall blueberry; white flowered rhododendron; cinquefoil; willows, grouseberry; globe flower; one-flower clintonia; one-flowered wintergreen. In wet areas thick moss carpets the floor.





Oyster Fungus (edible)



T.D. Lindsay



Clematis



Thistle

At lower elevations, the spruce-pine forest may also include the blue, or interior Douglas-fir. This tree is found most often on the southwest-facing slopes. In the North Porcupine Hills the forests have a sizeable component of Douglas-fir.

Above timberline (about 7,000') the forest ends and small clumps of trees interspersed by meadow occur. This is the subalpine zone. In addition to Engelmann spruce, alpine fir, whitebark pine and alpine larch are found here. The larch is an interesting conifer which, like a deciduous tree, loses its needles each fall. Just prior to dropping, the needles turn from green to a spectacular gold thus adding a brilliant hue to the autumn mountains. Each spring, new needles reappear.

Dwarf trees are common at these high altitudes. A tree only two or three feet in height may be 200 to 300 years old. Snow, cold temperatures, a very short growing season and high winds drastically affect plant growth. Associated with the dwarf larch and fir of the subalpine are the following plants: the grouseberry; pink and white mountain heather; numerous grasses; the glacier lily; western anemone; yellow columbine; nodding onion; Indian paintbrush; purple fleabane; fireweed.

The high alpine, situated above the subalpine, is completely devoid of trees. It is good hiking country, offering extensive views. If conditions are right, especially near streamlets or glacier and snow melts, verdant flower meadows may be found. Most of the plants of the subalpine will be found here along with other flowers such as: alpine forget-me-not; Lyle's iron plant; sweet-flowered shooting star; purple saxifrage; moss campion; alpine arnica; stone crop; and alpine cinquefoil. Hundreds of flower species await the interested botanist, be he amateur or professional.

Some high alpine slopes will be "dry" having little plant growth and gravelly soil. As well, on much of the East Slope, ridges extend beyond the alpine into bare rock and snow. Only isolated patches of sedges are found here.



K. Dezall

## WILDLIFE



Mule Deer      D. Shackleton

On Alberta's East Slope all of the so-called "true" big game animals - except for antelope - are found. Mountain goat, bighorn sheep, elk, moose, white-tail and mule deer and woodland caribou (in the north), are all present. The less accessible regions retain viable populations of grizzly, cougar and wolf. Black bear are common throughout. Generally the proposed recreational wildland areas encompass many of the higher quality wildlife ranges remaining today on the East Slopes.

Deer are widely distributed and in recent years the white-tail has become increasingly common in the foothills and major drainages of the Front Ranges. At high elevations, however, neither mule nor white-tail deer become abundant because of the severe snow conditions and limited winter ranges. Both deer species are localized in winter on key ranges where food and shelter are both available. In summer, when conditions are more favourable, populations are widely but sparsely distributed. Deer depend heavily on winter range, and loss of a key winter range (say to strip mining) will decimate the population. Deer require deciduous forest (aspen poplar) which is usually found on the lower slopes, and in the valleys and on south-facing hillsides of major drainages.

The behaviour of white-tail and mule deer differ considerably. Mule deer prefer a more open habitat than do white-tail and thus commonly winter at higher elevations. As a result the mule deer is seen to range farther west on the East Slopes than does the white-tail. Mule deer are more inclined to run from their enemies, while the white-tail will often either stand and let one walk right by, or will "sneak away" to escape danger. A white-tail, standing in a freeze position is one of the most difficult animals to observe. The mule deer, on the other hand, likes to see its enemy and risks being seen to accomplish this. Places like Trout Creek in the North Porcupines are ideal mule deer country - relatively open, plenty of aspen, wet enough for good shrub stands.

The bighorn sheep is abundant along the East Slopes and to most Albertans is synonymous with the Rocky Mountains. The bighorn is associated with stable, open grasslands, and its continued existence relies on a lack of disturbance. Temporary grasslands, which occur after forest fires, are little used by the sheep. The seasonal ranges of the bighorn sheep are traditional and appear to be learned by the young from older members of the population. Consequently, few ani-



Bighorn Sheep

V. Geist



Moose

V. Geist

mals wander from these "traditional" ranges, hence re-establishment of populations in areas which previously had been occupied by sheep, is rare. It is imperative therefore that the present winter ranges of bighorn sheep along the Eastern Slopes be retained and treated with care.

The male bighorn is an impressive beast growing a massive pair of curled horns. The older the animal the greater the curl. Occasionally, old rams may exhibit horns which spiral around some distance beyond a full circle. The ewes by comparison grow only small curved spikes. The horns of the rams are of importance in the fall during the rutting or mating season. Two mature rams will fight one another for the privilege of "acquiring" a ewe. The rams charge head first, often battering away at each other for hours.

The bighorn doesn't migrate from high to low elevations as much as the deer or elk. Often it will stay on higher slopes year round. Windblown southwest-facing slopes, which are generally clear of snow, are used as winter range. Lambing takes place in the spring when the ewes are separated from the rams. The young are often born in precipitous terrain where it would be difficult for a predator to attack the new-born.

Moose are the largest members of the deer family, often growing to 8 ft in height, with 4 ft long legs. The males display spreading palm-shaped antlers which are grown in the late spring - early summer and dropped late around the beginning of the next January. Females are antlerless. Unlike the bighorn, the



moose has evolved in association with several (temporary) vegetation types, which occur primarily after forest fires. As a result, being dependent on the willow vegetation of burned-over areas, natural populations have fluctuated widely in the past.

One major reason why moose are not as common in the mountains of the south today as they were in the past is related to our policy of forest fire suppression. The result of this policy has been a tremendous reduction in the number of large fires, fires which create willow-grazing areas. As the willow dies out and conifers take over, moose habitat declines accordingly. Soon the only moose ranges will be those small areas of open wet land in valley bottoms or on muskeg flats. This loss of moose habitat, occasioned by the infrequency of fire, when combined with increased vehicle access (hence heavier hunting pressure) presents a discouraging picture for maintaining large numbers of moose in the southern part of the East Slopes.



The elk, or wapiti, is truly a magnificent animal. Its graceful curving antlers are perhaps the most spectacular of any North American ungulate. As with the moose and deer, only the males grow antlers. During the mating season bull elk will grapple with one another using their antlers as fearsome weapons. On rare occasions, the antlers of two animals interlock, and the elk have been known to eventually starve to death. During the rut the bull elk can often be heard, over a distance of several miles, bugling - an almost eerie whistling sound.

Elk are grazers and require grasslands as the core of their winter and summer range. Like the bighorn, they need the minimal disturbance that large expanses of wilderness provide. Almost all of the proposed wilderness areas would act as reservoirs to ensure the continuance of sizeable elk herds. Elk are capable of wintering at high elevation. On these, and even on other lower level ranges, they simply won't accept excessive human activity.

Elk populations on the East Slope are much more numerous, particularly in the south, than they were at the turn of the century. A series of very hot burns along the front ranges cleared vast areas of land of their forest, producing grasslands ideal for the elk. However, as these grass areas are re-established in forest, and the forest protected from fire, the ranges will shrink, and so too will the elk populations.

Bull  
Elk D. Shackleton

The major river valleys in the northern part of the East Slope - e.g., the Clearwater, Red Deer and North Saskatchewan, are all excellent quality elk winter range.

Mountain goats are not really goats but actually a type of antelope. They spend much of their time on rocky crags of high ridges. The average person who only journeys the highway is unlikely to see them. Even a hiker, unless he travels high and knows where to look, may only see goats at a distance - a series of white dots on a rocky ridge. Goats are very sure-footed, moving easily on steep slopes and bluffs. Here the goat is generally safe, for few predators care to come after even the vulnerable young on such difficult terrain.

Two species of bear exist on the East Slope. The black bear is present throughout. The grizzly, however, is less often seen, requiring true wilderness



Male Black Bear

S. Herrero

Grizzly

D. Shackleton

and a large territory for its survival. The rapid decline in wilderness habitat in Alberta, as everywhere else in North America, has resulted in a much reduced grizzly population.

People tend to have an excessive fear of grizzlies. Certainly the sheer size and appearance of the bear is startling and the grizzly tends to become a dangerous animal if it is caught unaware, or if its young are threatened.

Generally grizzlies, left alone and unharassed, present little problem, usually moving away when a chance meeting between bear and person occurs. If the thought of meeting a grizzly upsets you, carry a cowbell or hang a small can partially filled with gravel from your pack. The bear (and unfortunately other wildlife as well) will hear you coming and will be long gone before you arrive. However, if you wish to see a grizzly, discard the can, be observant when travelling, and glass far slopes and alpine valleys carefully before approaching. Never run when confronted with a grizzly. They can outrun a human in even the roughest of terrain.



Black bears generally present little problem in the woods. They usually run from or avoid people. A black bear off in backcountry is a different and much more timid animal than the sometimes dangerous scavenger that frequents campgrounds and picnic sites. Occasionally the boars during May, when just out of hibernation and being avoided by the female, can get into a nasty mood and possibly cause trouble, as can a female with cubs.

Both black and grizzly bears hibernate, having cubs during late winter while still in hibernation. Two cubs per female is generally the rule. A bear with three cubs has often adopted one.

Cougar, grizzly and wolf play a role in the dynamics of ungulate populations, particularly the mule and white-tail deer. Populations of all these predators have been decimated by man. However, in Alberta all are now considered as "game animals" and thus have acquired some degree of protection. Continuing loss of proper habitat is perhaps the worst threat to stable populations of these predators.

Perhaps the small mammals, particularly rabbits and rodents, such as the well known ground squirrel, have suffered least from man's activities. They are still abundant and are an important part of the diet of almost all the predators of the East Slope, especially the coyote. Ground squirrel colonies are particularly numerous on the same open slopes which are favoured by species such as elk and bighorn sheep.



Coyote

D. Shackleton



T.D. Lindsay

## WHY CONSERVATION

Is it necessary now to ponder the question, Why Conserve? Is it not apparent the values that exist in these Wildland Areas? The option to save these pockets of wildness may not exist even a year from now. Albertans must act now!

Leave things as they are and resource development will creep into these last reserves. Let time go on, assume that the wilderness will always be there, wait and watch. Soon roads will wind into the alpine, roads often used only to explore, then abandoned, left as permanent scars on the high country meadows. Sit back and be idle, and you can expect to see this part of your heritage disappear before your eyes.

Is there any alternative but to get involved? Write, phone or visit your elected Member of the Legislative Assembly. Present a Brief (even a single page can suffice) at the Environment Conservation Authority's Hearings on the East Slope - June to July, 1973 - in support of these proposed recreational wildernesses. You don't believe an individual can accomplish anything these days? Try it; you may be surprised at the results. Participation is still a very real part of our democracy.

On the doorsteps of Calgary and Edmonton is one of Earth's most beautiful and wild mountain areas. Get to know the East Slope; use this book as an initial guide. Yet realize that it was written primarily to acquaint you with areas that may soon be lost.

These nine Wildland Recreation Areas represent a final haven for that wild spirit which is the lasting legacy of our land. May this spirit never falter, may our people always care enough to 'save the wild country'.

## ACKNOWLEDGEMENTS

The Alberta Wilderness Association is indebted to:

Ric Careless	Don Cockerton	Jim Currie	Dave Day	Jack Dezall
Ken Dezall	Glenbow Alberta Institute	Sharon Hartwell		
Steve Herrero	Skip King	Brian Kregosky	Bob McKee	Grant McNabb
Bill Michalsky	Tom Oliver	Dick Pharis	Jim Redmond	
Bruce Runge	Gordon Timpson	Don Wales	Alex Zellermeier	
Brian Horejsi	Dave Shackleton			

who contributed their time and background knowledge to make this proposal a reality.

Kudos also to Linda Bellavance, Val Preuter, Kathleen Thrasher and Joan Fox, whose patience and expert typing helped us through the many drafts.

Karen Kunelius and Bill Matheson deserve thanks for their excellent cartography and Bill especially for his unique ability to design our cover and photo inserts. Lorne Perry prepared the final layout. The high quality of the photo enlarging and printing was ensured by Andy Jaremko.

Finally, the interest and excellent work of our printer, Llyn Hippard of LlynPrint is most appreciated.

## PHOTO ACKNOWLEDGEMENTS

Photos for the front and inside back covers by Bill Michalsky. Photographs, where not captioned, were contributed by:

Larry Cordes	Duncan Lindsay	Bill Michalsky
Dick Pharis	Dave Shackleton	Don Wales

## Canadian Mines and Technical Survey Maps

Wild Land Recreation Area	1:50,000	1:250,000
South Castle	82G/8W, 82G/8E, 82G/1W 82G/1E	82G
Upper Olamdn	82J/2E, 82G/15E	82G, 82J
North Porcupine	82J/1E, 82I/4, 82G/16E	82J, 82I, 82G
Upper Kananaskis	82J/11	82J
South Ghost	82O/3W, 82O/3E	82O
Burnt Timber-Waiparous	82O/11W, 82O/11E, 82O/6W 82O/6E	82O
Ram-White Rabbit	83C/1E, 83B/4W, 82N/16E 82O/13W, 82O/13E	83C, 83B, 82N, 82O
White Goat	82C/10W, 82C/10E, 82C/7W 82C/7E, 82C/2W, 82C/2E	82C
Folding Mountain	83F/5W, 83F/4W, 83F/4E	83F

## Alberta Department of Lands and Forests (Composite Forest Cover Series)

Wild Land Recreation Area	1:40,000
South Castle	82G S.E.
Upper Oldman	82J S.E., 82G N.E.
North Porcupine	82J S.E., 82G N.E.
Upper Kananaskis	82J N.W.
South Ghost	82O S.W.
Burnt Timber	82O N.W., 82O S.W.
Ram-White Rabbit	83C S.E., 82O N.W.
White Goat	83C S.E.
Folding Mountain	83F

## Provincial Access Maps

## Wild Land Recreation Areas

Scale: 1" = 4 miles

---

South Castle	82G
Upper Oldman	82G
North Porcupine	82G
Upper Kananaskis	82O, 82J
South Ghost	82O, 82J
Burnt Timber	82O, 82J
Ram-White Rabbit	83B, 83G, 83S, 83C
White Goat	83S, 83C
Folding Mountain	83S, 83C

## Rocky Mountain Forest Reserve Maps

Scale: 1" = 3 miles

- 
- |                      |  |
|----------------------|--|
| 1. Crowsnest Forest  | Includes: South Castle, Oldman and North Porcupine....                           |
| 2. Bow River Forest  | Includes: Upper Kananaskis, South Ghost and Burnt.....<br>Timber-Waiparous Areas |
| 3. Clearwater Forest | Includes; Ram-White Rabbit and White Goat Areas                                  |

Canadian Mines and Technical Survey Maps are available in Calgary from the Geological Survey of Canada, Institute of Sedimentary and Petroleum Geology at 3303 33 St. N.W. The single sheets are 50¢ and double sheets are \$1.00.

The Alberta Maps (Provincial Access, Composite Forest Cover and the Forest Reserve Maps) are available in Calgary at the Alberta Forest Service - Bow River.. Forest at 5425 85 St. N.W. The prices are \$1.00, \$1.50 and \$1.50 respectively, or in Edmonton at their Headquarters in the Natural Resources Building.



## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

Both the Canadian Petroleum Association and the coal operators of Alberta have told us that they feel the technology will improve sufficiently that they can carry out their operations and cause minimal environmental damage. How does the Wilderness Association feel about the possibility of this ever occurring? If they did get to that degree of efficiency would you find their operations acceptable?

MR. KYLLO:

We have presented a statement to the Authority previously on the possible means of getting around some of these resource conflicts.

The oil and gas industry usually uses a very small amount of land. With proper management conditions and support of such things as helicopters for the exploration and development phase this industry could go on within wildland recreation areas. We don't feel that this is compatible by any means, but if there is no other way, maybe this is something that could be worked out.

We feel the first position the government should take is to remove these leases by letting them expire, or by trading them for other leases of comparable potential within the province. If this is not possible and if the company is definite about going ahead with the development, then perhaps very stringent control could be enforced and such development could take place. In this case we think that a committee of government, industry and conservation groups should be formed with the authority to enforce very stringent regulations.

We don't feel coal, especially surface mining operations, is compatible at all. There is extensive use of the landscape. Major coal seams falling very closely upon the key wildlife winter ranges are a problem. Exploitation of these coal seams would remove most of the wildlife from the region. The wildlife resource is one of the compatible and desirable assets of the wildland recreation areas.

## ENVIRONMENT CONSERVATION BOARD SUBMISSION

RE: PLANNED USE OF THE EASTERN SLOPE OF THE ROCKY MOUNTAINS

Thank you for the opportunity to speak. My name is Phil Gordon and I am speaking on behalf of myself and representing some 10 other motorcycle trailriders from the Edmonton area who occasionally travel to the areas in question to trailride.

We believe that the ecology of the Eastern Slope of the Rocky's can be preserved if all users are responsible enough to recognize the rights of other users. As motorcyclists, who enjoy trailriding on existing roads, cut-lines and power lines, we believe that we recognize the rights of other campers, hikers and horseback riders. Their desire for peace and quiet does not go unnoticed by my friends and I; although we recognize that other motorcyclists, who do not ride with us, do not afford others the right to a quiet and clean environment.

As motorcyclists, we prefer to ride in the woods, because we find street and highway riding too dangerous.

We are not interested in cutting new trails on virgin hills for the sake of reaching the top of a hill, we prefer to use the roads already there.

Our policy has always been to carry out any litter that we create with us to the campsite for disposal in the trash cans provided. Additionally, we have often removed litter left by others.

The campsites that we use are policed before we leave so that others can at least start out with a clean campsite.

Presented By: P. Gordon

I have been involved in various organized and recreational sports since 10 years of age and I have yet to see a sport or recreation that bridges the generation gap as well as members of a family trailriding together. Fathers (and in some cases mothers) with teenage or sub-teen children can certainly find a lot to talk about and do together if they've got a couple of trail bikes in the family.

We recognize that common sense on the part of motorcyclists can do a lot to eliminate the conflict between motorcycle riders and others hoping to enjoy the wilderness; and we are working to this end.

In the U.S.A. there are so many motorcyclists that powerful anti-motorcycle groups like the Sierra Club have launched well planned fights for land closure. The Sierra Club has been very successful. It is strange that an association with 80,000 members should be so strong. But most of those 80,000 members are not rank-and-file citizens but highly affluent, powerful individuals. This prompted a writer in Esquire Magazine not long ago to offer this definition of a conservationist: "A \$20,000-a-year man telling all \$7,500-a-year men to stay where they are so we can all survive".

In fairness to the conservationists, though, my friends and I agree that some of their criticisms are well taken. Probably their main criticism is that motorcycles are noisy. This criticism has been placed squarely on the motorcyclist, who is often at fault but this same criticism can be directed towards the motorcycle manufacturers, distributors and dealers who are profiting by the ever increasing popularity of motorcycle trail-riding. Proper mufflers that cannot be modified and spark arrestors that cannot be removed should be supplied by all manufacturers before the bikes are allowed into the country for sale. Distributors and dealers should inform all of their new customers of the need for quiet bikes. Dealers should stress that the removal of the sound baffle from the muffler does not appreciably increase the horsepower rating of the bike.

Nobody can deny that many of today's off-road bikes are ridiculously noisy; what is almost unbelievable is that the manufacturers (the motorcycle industry) have never moved to muffle down their products until last year.

Many motorcyclists suggest that motorcycle riding parks may be the solution to the off-road riding problem. Is the time coming that whenever an individual wants to ride his bike for fun, he must pay a fee? Providing designated areas for cycling may be the answer but if everyone rides in the same area the land will erode. If the cyclists were allowed to use a wide enough area - and then rotate the areas regularly allowing the land to recover - this could be the answer.

IF THE AREAS BEING DISCUSSED ARE KEPT OPEN and recognizing the need for a policy of land management that will preserve the Eastern Slope of the Rocky Mountains for all the generations that will follow, may I make the following recommendations:

1. That motorcycle riding around campsites be restricted to access in and out via established roads.
2. That motorcycles be restricted to Forestry Roads, cut-lines and power lines. In other words, prohibit motorcyclists from cutting their own trails and using game trails.
3. Insist that motorcycles have proper mufflers and spark arrestors in working condition. Penalize riders who do not have quiet bikes.
4. Insist that all motorcycles used in the area be registered to the rider and that the rider carry proper insurance.
5. That a program be established to acquaint all citizens of the need for and means to preserve this land.

JUSTIFICATION FOR RECOMMENDATIONS:

1. Restrict campsite riding to access in and out via established roads. Such a restriction will keep irresponsible cyclists from "buzzing" around campsites that are usually shared by campers who do not have trail bikes. This practice of "buzzing" around campsites must annoy and strain the patience of other campers who are no doubt looking for some peace and quiet. If trail riders do their riding away from the crowded areas they are less likely to offend anyone. Also many campsites are chosen, I'm sure, because of the natural beauty close at hand. If riders are restricted to in and out access around the campsites and if the numerous hills and valleys close at hand are declared off limits to bikers; then citizens there for camping will not be bothered with cycles "buzzing" up and down the hills and valleys polluting the atmosphere with noise and eroding the hills and valleys cutting new trails and spoiling the natural beauty around the campsites for all to see.
2. Restrict riding to Forestry Roads, cut-lines and power lines. If we keep motorcycles off virgin hills and game trails and confine them to existing roads, cut lines and power lines motorcyclists could then no longer be accused of eroding the natural state of the environment. The existing forestry roads, cut lines and power lines provide all the challenge required of any rider.
3. Insist on proper mufflers and spark arrestors in working condition. Quiet motorcycles can help develop a better attitude towards recreational cycling. Confining competition dirt bikes with expansion chambers to the motocross tracks and practice areas will reduce the overall noise level created in the wilderness immeasurably. Motocross bikes with expansion chambers, when used for trailriding in the wilderness, do nothing but prejudice the opportunities presently available to trail riders.

4. Insist on registration and insurance for all riders and their motorbikes. This law is already in effect and has been since November 1972, although I suspect that it is not uniformly enforced.
5. Embark on a program, financed by Provincial funds, to acquaint all citizens of Alberta, especially those travelling to the areas being discussed, of the need and means to preserve the environment. Prominent billboards and signs outlining a few common sense rules and the reasons for the rules could perhaps develop a more responsible attitude towards environmental preservation. Also, attractive pamphlets and brochures could be prepared with illustrations and distributed to all off road vehicle dealers, camping supply outlets, camping trailer dealers and Saddlery shops to be handed out to all customers.

Respectfully submitted,

A handwritten signature in cursive script that reads "Phil Gordon". The ink is dark and the signature is fluid, with the first and last names clearly legible.

Phil Gordon.



## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

It's quite obvious that we don't need any regulations to control you or your friends. Our problem is the people who aren't your friends.

Your regulations look extremely good to me. What will it cost to come up with any sort of enforcement policy for these people?

MR. GORDON:

As far as I know the forest service and their personnel have the authority to demand that riders who don't have registration or who have particularly noisy bikes leave the area. Certainly the Mounted Police have this authority.

MR. KINISKY:

I talked to some members of the Calgary Motorcycle Club, and mentioned that the blasting noise was extremely offensive, especially in the wilderness. I did mention that there was no question that bikes could be muffled so they would be reasonably silent. These people in Calgary said, no, they can't. They must have this explosive noise for some reason or other.

MR. GORDON:

I don't agree. I've ridden scramblers, the so-called moto-cross bikes. These are provided, especially the European versions, with expansion chambers. The expansion chamber provides back pressure into the cylinder which enables the bikes to utilize all available power. It seems to me that the expansion chamber also expands the sound. Sometimes they add mufflers, which are generally required in races all over North America, but that still doesn't muffle the sound.

I'm not talking about competition dirt bikes. I think competition dirt bikes should stay out of the wilderness because they are too noisy. There is no way to muffle them and still get the type of performance required. They race every Sunday and they practise once or twice during the week. They have areas. They race usually on private property, this right is negotiated with the farmer or landowner. Similarly they have practice privileges there once or twice a week. My suggestion is that we request they stay there, because they are not trail riding bikes. The gear ratios are bad for hill climbing. The only way they are going to get up a hill is to take a long run at it, get the revs way up and scream up the hill. The noise is very distracting.

However, trail bikes are a different breed. If you don't remove the sound baffle, or take the muffler off and add an expansion chamber hoping to improve energy performance, then there will be no problems.

As far as I know, bikes coming into North America must now conform to certain noise regulations. It's 92 decibels in California. In Edmonton it's 88 decibels measured 15 feet from the traffic lane during the daytime and 83 after sundown. I don't think that is too difficult to enforce although I realize it would take a lot of paper work to get some policy going. But there is no doubt about it, you can keep a bike quiet.

MR. KINISKY:

Why is it that the driver of a motorcycle which actually is not in motion sits there running that infernal throttle?

MR. GORDON:

I suspect he probably has to tune his bike. He fears that if he releases the throttle the bike will stall. I don't think it is necessary.

MR. DOWLING:

Is there any fire hazard using a trail bike in the wilderness area?

MR. GORDON:

I remember reading an article discussing the requirement of spark arresters in California. The author couldn't see the reason for spark arresters; he felt that you couldn't start a fire with the exhaust pipe of a motorcycle if you tried to or even had to. Nevertheless, spark arresters are required in the State of California, as they are in just about every other state, and I am sure they are required here.

I spoke earlier of The Off-Highway Vehicles Act which to my knowledge isn't enforced. I've seen instances of competition bikes, which are not registered and have no insurance at all, racing around areas where there are other bikes. We've spent money to get our insurance and time to get our licences. The law is on the books but it is not enforced.

MR. DOWLING:

Can you give us some idea as to how many motorbikes there are in Alberta and what percentage of those would be trail bikes?

MR. GORDON:

I have no idea.

MR. DOWLING:

Do you think the trail bikes are a relatively small proportion of the total?

MR. GORDON:

I don't think so, they seem to be quite popular. I can't understand why a person would want to ride a motorcycle in the streets. But I can see the attraction of biking in the hills.

MR. DOWLING:

I congratulate you for this brief, you have some very useful thought-provoking recommendations.

Are there any volunteer associations of motorcycle owners in this province which could possibly discipline their own groups?

MR. GORDON:

I know a few of the motorcycle dealers and I doubt that they would do it unless they were told they had to. But that's really not for me to say. I don't know.

MR. DOWLING:

There is no motorcycle association in the province?

MR. GORDON:

There is the Canadian Motorcycle Association, but it is confined to competition riders, to moto-cross, dirt tracking and trials riding. There is no organization for the casual trail rider that I am aware of in Alberta. There isn't one in Edmonton.

DR. TROST:

You have put a constructive and positive series of recommendations before us. Have you had the opportunity to discuss them with any other recreational groups? There has been some tendency for recreational groups to try to work out compromises that would enable usage of the same piece of land by increasing numbers of recreational users.

MR. GORDON:

No I haven't. I think I know what you mean, perhaps getting all the people who own all-terrain vehicles together.

DR. TROST:

And hikers, fishermen, the Wilderness Association and so on.

MR. GORDON:

No. I think though that the conflict was stated in the brief earlier, you have hikers, backpackers, horseback riders and so on. I think it would be pretty difficult for us to get together on some of these issues.

A friend of mine does a lot of riding in California and he pursues this type of thing. He said that he just can't talk to a Sierra Club member, there is no talking to them. They are that hard-nosed about it.

I don't use the term conservationist in a derogatory sense because I like to think my friends and I are conservationists as well - I don't think we tear up the terrain or pollute the atmosphere with that much noise.

DR. TROST:

This morning Mr. Leo Kylo put forth certain proposals for recreational use of wildland. He objected to off-road vehicles. Have you spoken with him? He's not all that hard-nosed.

MR. GORDON:

No I haven't.

DR. TROST:

Would you do it?

MR. GORDON:

Yes.

H. Becker summarized the Canadian Petroleum Association's Submission presented formally in Calgary.

PROPOSAL

For the creation of  
WAPATEEHK CANYONS NATURAL AREA  
LANDSLIDE LAKE NATURAL AREA  
and  
WAPATEEHK PROVINCIAL PARK

Within certain de facto wilderness areas deleted  
from the White Goat Wilderness

Submitted to the Environment Conservation Authority East Slope Hearings  
at Edmonton, July 5, 1973, by Brian Kregosky, Graduate Student, Department of Geography, University of Calgary.

Presented By: B. Kregosky



PREAMBLE

In two proposals and one brief, previously given to the E.C.A. East Slope Hearings, this writer has attempted to show his involvement as a student of recreation and his concern, as a native Albertan, for recreational administration and use of the Provincial forest reserves. Basically, he has asked for increased agency acknowledgement of the benefits and values of outdoor recreation, considered second only to watershed values in the long term. Various land designations and zones have been suggested in the previous briefs in order to preserve and protect the natural landscape so necessary for maintaining the quality of various recreations.

The brief to the Calgary Hearings, under Natural Areas, stated, "...action should be taken by the government to establish an inventory program in order to identify unique ecological and geological areas, within the entire province as well as the east slope, for consideration as class "C" parks and resultant preservation and protection of inherent values. Certainly, there exists more than six unique natural areas, presently designated."

The same brief, under Provincial Parks, discussed the following systems deficiency:

"There is no provincial park now in existence that is representative of the alpine ecological zone (wilderness areas are not parks). Furthermore, only three (Entrance, Bow Valley, Police Outpost) are located in true sub-alpine zones... Of the 52 provincial parks only Entrance is located within the provincial Forest Reserves. The need for various types of provincial parks within the Reserves and especially representative of the cordillera physiographic region is of immediate concern. The stated need for larger parks (re: Position Paper #13) is easily satisfied by allocation of suitable primitive areas for this purpose." These quotations are especially relevant to this proposal.

This writer spent the summer of 1972 carrying out field research for a thesis entitled, 'Recreational Analysis of a De Facto Wilderness Area'. The study area was, in fact, those 316 square miles now deleted by legislation from the White Goat Wilderness Area. A total of 280 miles were covered on five foot trips into this area. An intimate appreciation for that mix of landscapes

which comprise the White Goat de facto area has thus been gained, through the eyes of a researcher, and, more important, through the eyes of an interested recreationist.

It is with the foregoing in mind that this writer deems it necessary to offer the following dual proposal, via these public hearings, to the Government of Alberta :

WAPATEEHK PROVINCIAL PARK  
and  
WAPATEEHK CANYONS NATURAL AREA  
LANDSLIDE LAKE NATURAL AREA

I      Proposal: Designation of WAPATEEHK PROVINCIAL PARK1.    INTRODUCTION

A basic deficiency within Alberta's provincial parks system--the lack of present representation of the alpine ecosystem and cordilleran physiographic zone--are stressed in the Preamble to this proposal.

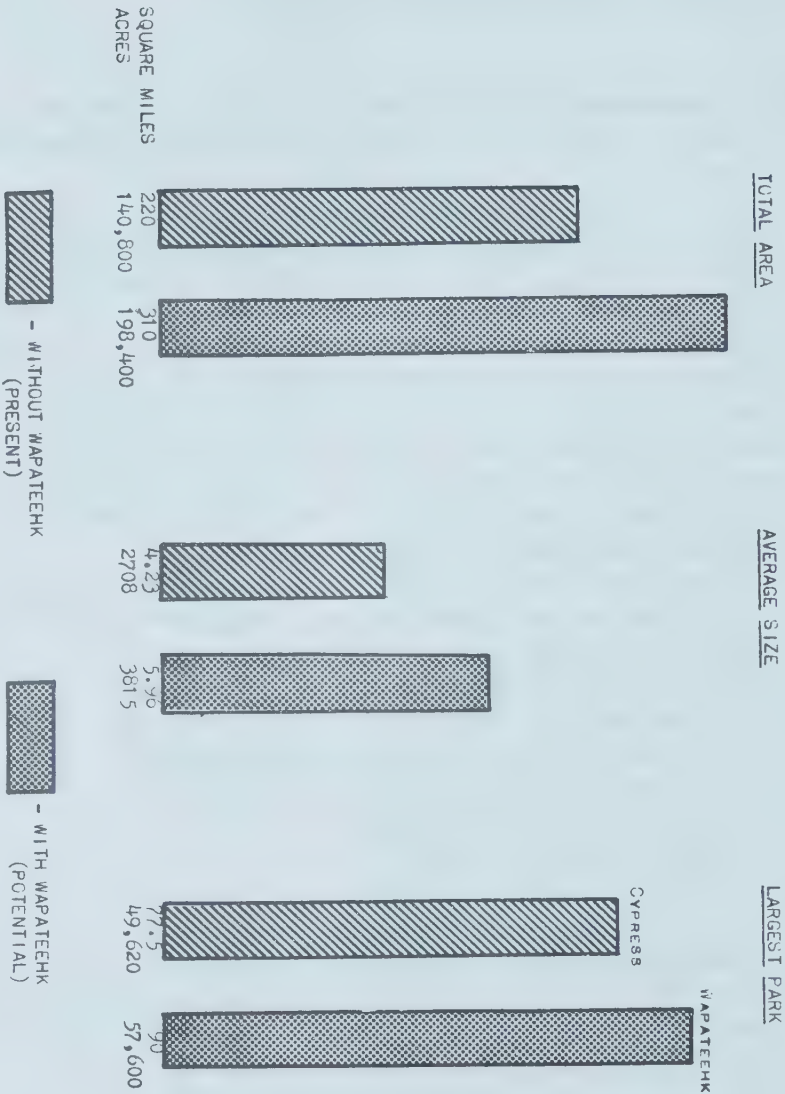
Two other deficiencies are evident. Firstly, there is no existing provincial park abutting, or buffering, National Park boundaries within Alberta's east slopes. Aside from use-restricted Wilderness Areas, there is no forest area entirely set aside for the protection of its natural landscape and for the dispersed or primitive recreations consistent with such an undeveloped, non-facility oriented area. Secondly, there is a size deficiency both in the total area dedicated to parks as well as the small size of present parks. Based on the Alberta Parks Resource and Facilities Chart, 1973, and including Fish Creek, the 52 provincial parks total 220 square miles and average 4.23 square miles (140,800 acres, 2708 acres respectively). (see graph attached - fig. 1).

Twenty-seven parks are under 500 acres in size. It is apparent that a need exists for larger provincial parks. In agreement with the above, the recent Provincial Parks Position Paper #13 stresses:

- it will provide land acquisition for new park space
- there should be more emphasis on outdoor recreation
- we should preserve the natural setting in perpetuity
- we should protect them (parks) from mechanized use and certain intensive developments
- more park space is needed
- we should emphasize open space
- larger parks will be favored

For the above reasons, and because of the proposed area's capability, suitability and feasibility to satisfy all relevant criteria it is proposed that the area of discussion be considered for designation as a Class D Provincial Park (Natural Environment Recreation Area).

**FIG. 1. - ALBERTA PROVINCIAL PARK SYSTEM - POTENTIAL \***



\*BASED ON ALBERTA PARKS RESOURCE AND FACILITIES CHART, 1973. (PLUS FISH CREEK).

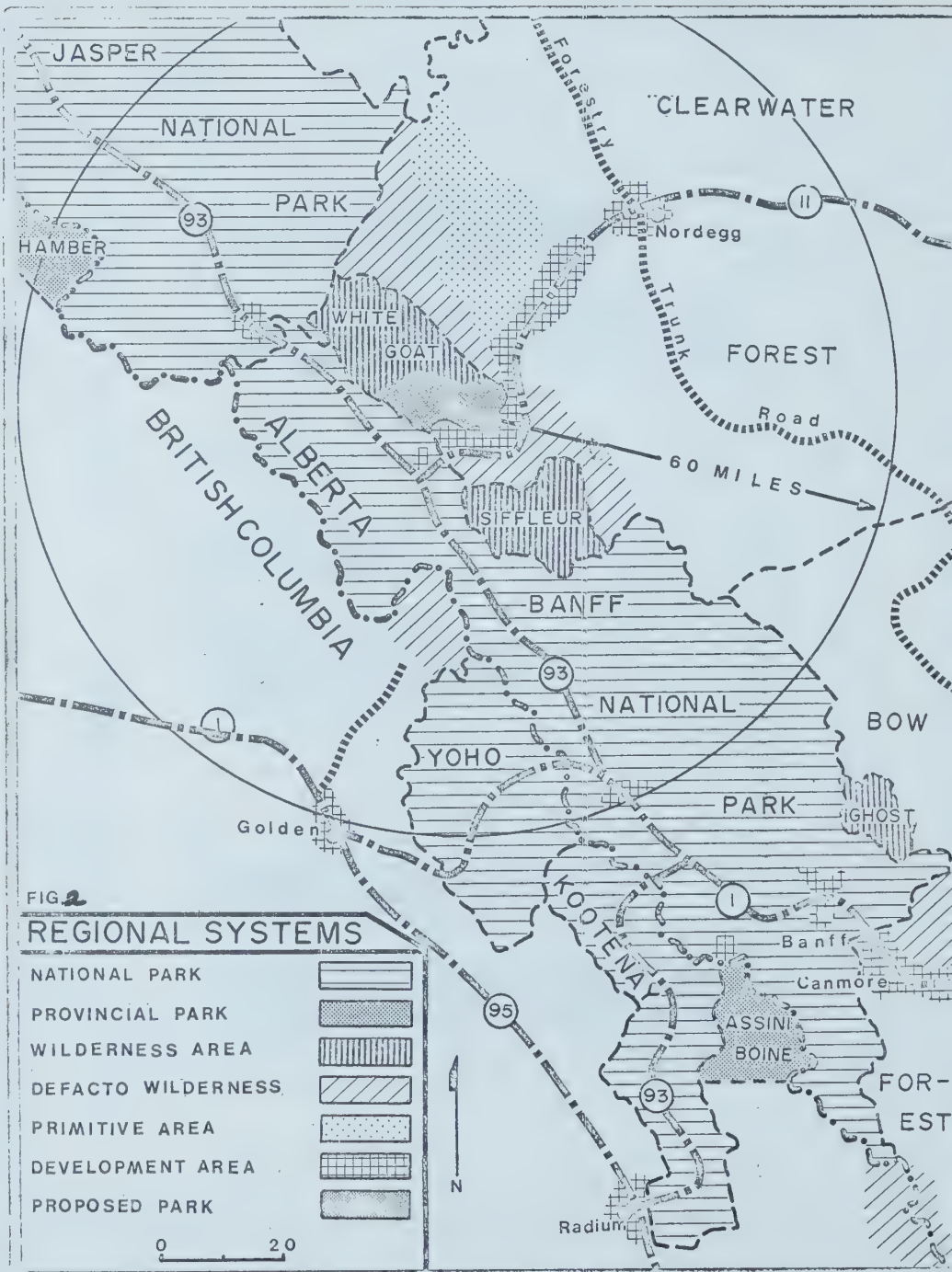
## 2. DESCRIPTION

The proposed park area is that land, comprising 90 square miles, more or less, of the Cline River's south watershed and recently deleted from the White Goat Wilderness. Its 57,600 acres lie almost entirely on the south bank of the Cline River and are extremely well protected by abutting Banff Park on the west, the present White Goat Wilderness on the north with a high mountainous ridge exceeding 8,000 feet making up the south and east boundaries. Four main creeks, responsible for the valley systems, flow into the Cline. Five small lakes are located at the valley heads. Seven peaks exceed 10,000 feet. This high elevation area is characterized by the large amount (70%) of its area being above treeline (alpine and rockland). The remaining 30% is sub-alpine forest of pine and spruce.

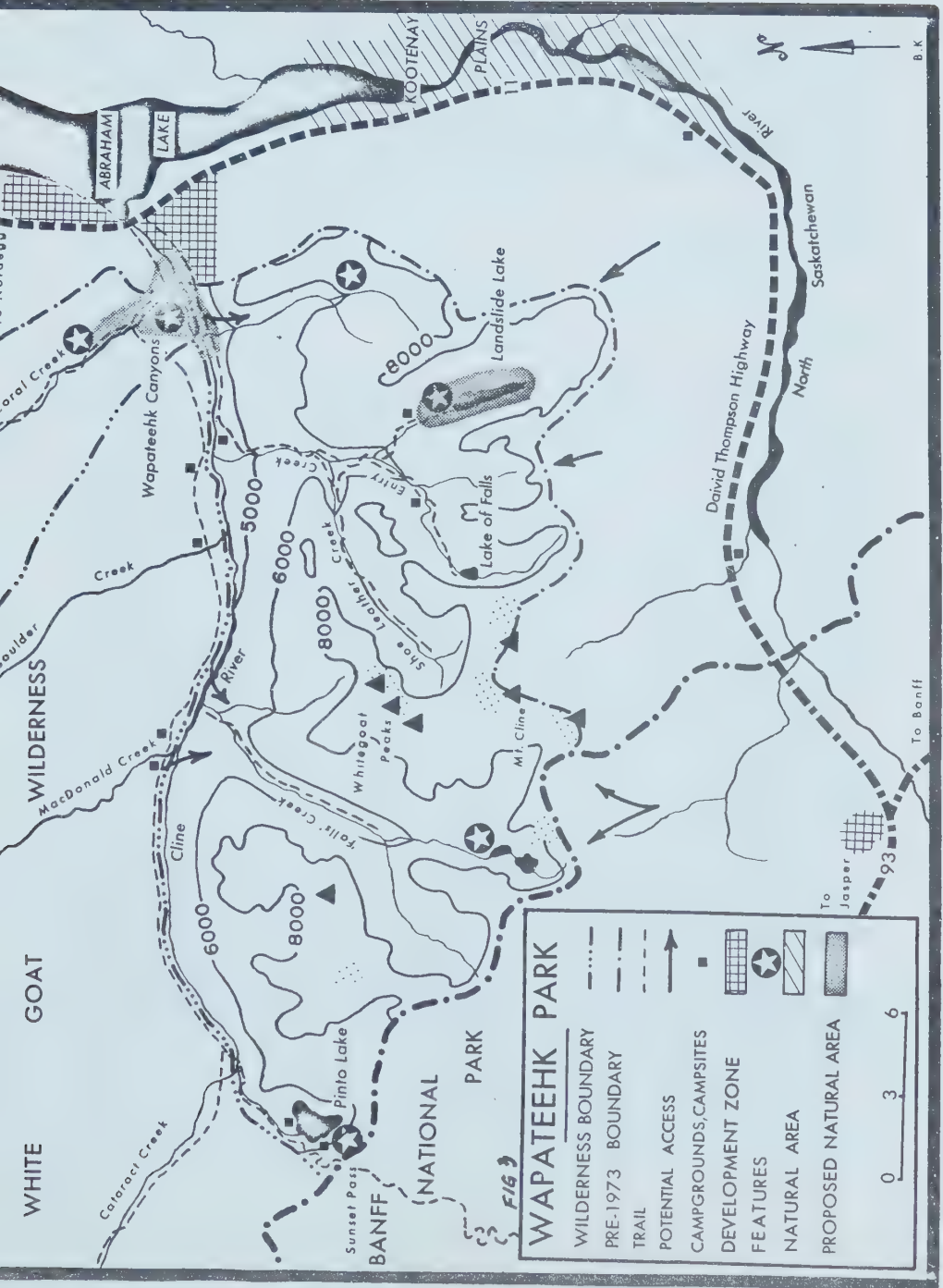
Certain natural features such as waterfalls, canyons, caves and glaciers are to be found within the area. As well, there are trails in various valleys although no man-made facilities, such as cabins, are to be found. Trailed access is available via Sunset Pass on the west, Cataract Creek on the north and Cline Crossing on the David Thompson Highway to the east.

Because this area lies entirely within the mountain proper west of the Front Ranges its rugged topography displays high scenic values. The mix of high rockland, tarns, glaciers and forest is supplemented by the presence of various natural features. Pinto Lake is partly fed by cold water springs at the cliff base. The first creek drainage west of Mt. Cline contains at least five waterfalls along its eight mile course--the major fall a 500 foot vertical cascade worn into the cliff face. The first creek basin west of the proposed boundary (i.e. Elliot Peak) is reputed to contain some cave features. As described in the following natural area proposals, the two main features are the Landslide Lake rockslide and the canyon complex of the Cline River and its tributaries. This canyon area is particularly unique not only because of the number of canyons (3) to be found in such a localized area but also because of the diversity of features they display. Both areas are presently accessible by trail, the canyons being slightly more than one mile off of the David Thompson Highway and open to heavy future viewing.

The proposed park area has various potentials for outdoor recreation within its 90 square miles--an area which would make it Alberta's largest







provincial park, exceeding Cypress Hills Park by some 8,000 acres.

The name proposed for both this area and the canyon complex is Wapateehk, Stoney tongue for white goat. It was the original name for the Cline River. It would thus recognize a historical fact as well as provide an indigenous name to complement that of the present White Goat Wilderness, that area of which it was so recently a part.

### 3. RESOURCES

#### Subsurface Resources

There is no coal bearing strata within the area. The main potentially developable coal seams lie in the Bighorn Range, some twenty-five miles north west of this area's east boundaries.

Potential for gas and oil is minimal, if non-existent. Evidence of related activity in the environs immediately adjacent to the proposed area suggest little development probability. For example, a petroleum and natural gas reservation (#1695 to Pennant Oils) located between the area's south boundaries and the North Saskatchewan River was surrendered in 1972, it being held for only two years. A McDermott-Triad well just five miles north-east of Cline Crossing was abandoned during drilling. As a result of leases in the Job-Opabin Creek area, a Shell consortium drilled a well on Opabin Creek, 30 miles north. This dry hole resulted in the 1972 surrender of the leases. These examples serve as indicators of low gas and petroleum potential both in the proposed park area as well as contiguous areas.

Other subsurface resources such as quality quarrying stone or gypsum deposits are not found in the area.

#### Surface Resources

The south watersheds of the Cline River contain relatively little grazing resource—either as grassland or alpine meadow. Most above-treeline areas are rockland. What feed there is will only support the present game populations. Domestic grazing is not carried out, thus eliminating any conflict.

The area is prime watershed and this value is recognized. Possible small dam impoundments, surveyed in 1923 below Pinto Lake and below the Cline-MacDonald Creek confluence, were marginal at the onset and are now negated by the Bighorn Dam.

The timber resource is not economically developable at present. The forest composite maps show no mature stands within the area. While isolated

mature spruce are found in some higher valley locations their low volumes, inaccessibility and recreational value negate consumptive considerations. The majority of the lower valleys are clothed in the immature dense 'dog-hair' stands of lodgepole pine, worthless as saw timber and useful only for pulp-wood operations. The latter do not exist in the area. Furthermore, approximately 70% of the total timber resource is classed as protection forest for purposes of maintaining watershed quality.

While the forest resource has little present economic value its value for watershed protection and recreation aesthetics demand continuing protection.

#### RECREATIONAL RESOURCES

The rugged landscape and history of past use suggest the best use of the proposed area to be extensive recreations. The lack of a resource base for any type of commercial-consumptive operation lends weight to recreational use as well as eliminating the possibility of future conflicts. Recreational use will be complementary to that carried on in the White Goat Wilderness but, because of the type of designation proposed, will allow activities such as fishing and horse-back riding. The Red Deer Regional Planning Commission maps the preferred resources as watershed, wildlife and recreation. The primitive recreations of a dispersed type that are most suited to the area are also compatible with watershed protection and wildlife (hunting would be foregone under park status). The Conservation and Utilization Committee's Resources of The Foothills rates Pinto Lake and the Entry Creek basins as having excellent capability with the Mt. Cline-Whitegoat Peaks area having a moderate capability (Map 3). Locations either within, or contiguous to, the proposed area rated as having excellent recreational potential by the latter report are the Cline River, Pinto Lake and Coral Creek.

Past use demonstrates certain recreation capabilities. Most climbing within the original White Goat Wilderness was carried out in the Mt. Cline-Whitegoat Peaks region. Access, maximum elevations and the presence of a glacier are factors influencing capability and consequent use. Hunting as a use in the area has been subordinate to more productive areas to the north such as MacDonald Creek and the Job Creek-Brazeau River area. Fishing has

been carried out at Pinto Lake before the coming of the white man and its productiveness attracts users via the easily accessible Sunset Pass. While the Cline River and south watershed streams offer low potential for sustained fishing, the Lake of Falls and Landslide Lake have been stocked and may be future alternatives to Pinto Lake. Both these lakes are accessible by rough trail from Cline Crossing.

The proposed area's capability for those recreations allowed in a provincial park, i.e. hiking, riding, cross-country skiing, fishing, climbing, camping, is facilitated by the existing trails. Use at present is focused on Pinto Lake. This trail is important also in that it is part of the Great Divide Trail and also controls east-bound trail traffic into the White Goat Wilderness. Use of the 'Old Cline's Trail' along the Cline River is necessary to gain access to the intermediate creek basin of 'Falls Creek'. The trails of the Entry Creek basins have received little use to the present they are probably outfitter built and are not known to the public as they are not on available maps. The accompanying map shows their general route location. It also shows potential cross-country access routes to certain sections of the area. Because the south basins of the Cline River are mostly weathered shale rockland above treeline they offer some potential for trail-less alpine routes for the adventurous user. Two such routes are ridge and basin traverses south of Pinto Lake and from Landslide Lake to Shoe Leather Creek. Pinto Lake, because of fishing and well-known access, is the main activity area. The future should see it become a heavy-use area along with the Wapateehk Canyon area. The other trailed valleys, especially the Entry Creek basins should receive moderate use. The inter-valley areas of high peaks and rugged topography will receive light use.

The proposed area offers a rugged and varied viewscape which further complements the capabilities for specific recreations. The mix of glacier, mountain, rockland, treed slopes and rushing water contribute to a high capability for viewing. Internally, most views are available from higher elevations both on, or above, the trails. The lower trail sections pass through dense lodgepole pine stands, their enclosure obscuring much of the scenery. The special geologic features mapped (Map 3-west to east) are springs at Pinto Lake, 500 foot waterfall on 'Falls Creek', rockslide at Landslide Lake, caves near the east boundary and a canyon complex

around the Cline River-Coral Creek junction. (Two features are considered unique enough to warrant natural area status. See previous section of this proposal). These listed features amplify the scenic and aesthetic value of the landscape.

The proposed area, externally, is very important in adding to the view available from many locations within the White Goat Wilderness which shares all of its south boundary with the area. Most sections of the Cline River trail follow the river's edge being open to the south but only offering vegetation obscured views to the north. This trail, therefore, is very dependant on the high quality available scenic view of the south Cline area, the White Goat Peaks acting as a focal point for most of this trail. The aesthetics of the recreational scenery, enjoyed from within the area or from the White Goat Wilderness are further enhanced by the absence of other land uses such as seismic line activity or timbering. Only with designation of a protective park status can the high quality viewscape for two valuable recreation areas be guaranteed.

While various use projections indicate increases in general outdoor recreation volumes specific regional factors almost dictate increased use of the proposed area. National Park, Department of Highways and Alberta Forest Service campgrounds as well as youth hostels are located on the Banff-Jasper and David Thompson Highways. The latter road should be paved in two years and will generate much recreational traffic as will the Abraham Lake area. A service center (motel-campground) has been built north of Cline Crossing. This location, at the head of access to the proposed park area, the White Goat Wilderness and the White Goat de facto wilderness (Coral-Job drainages), is very important as it is a potential site for major resort developments (Mt. Cline Leisure Resort proposal, Odessey proposal). A potential wilderness clientele may thus be generated on the doorstep to the area. Map 2 indicates the potential regional recreation systems centered around the North Saskatchewan River Valley. Existing political land units are national parks, wilderness areas, and a provincial park (Hamber). Other lands, not legally designated, have capabilities for wilderness recreation (White Goat and White Rabbit de facto areas, Blaeberry River), primitive recreation

(Bighorn and Blackstone River areas) and developed recreation (North Saskatchewan corridor). The potential of the region, within which the proposed Wapateehk Park is situated, for satisfying a variety of outdoor recreations is extremely high. As previously mentioned, the potential of the proposed area for recreation is estimated to be high to moderate. Future designation will help realize this capability in securing the area for those recreations which are best suited to its use and maintenance of the quality of the recreational resources.

5. DESIGNATIONS AND ALLOCATIONS

The proposed area, up to December 31, 1972, was part of the White Goat Wilderness. Due to this past designation and evidence of low resource potential it has no leases or reservations in effect at present. In view of the value for watershed, wildlife and recreation it is doubtful that any type of allocation will be made. A trapping lease (#544) which originally covered the entire area was not given out in 1972. Its status for the upcoming 1973-74 season is not known but the remuneration to the leasee is not considered high enough to warrant such use. This lack of any type of designations or allocations, therefore, guarantee the present fact of no conflicting resource uses. Since wilderness deletion the area, being all crown land, is open to possible allocations. This is further reason for protective designation. The controlled buffer zone concept of the Wilderness Areas Amendment Act, which would not offer as much protection as provincial park status, has not been applied to the area since its deletion from the White Goat Wilderness.

6. BENEFITS AND VALUES OF PROPOSED STATUS

It has been emphasized in the foregoing that the proposed area has both demonstrated and potential capability for various primitive recreations and that the most suitable land use is recreation, such use being compatible with watershed and wildlife. The low potential for resource development and resultant lack of allocations, such as leases and reservations, further attest to the areas suitability for recreations that would be applicable under provincial park status. These reasons add weight to the feasibility of such a designation. The advantages of provincial park status oriented to undeveloped natural resources for the south Cline watershed area is summarized in the following:



### 1. Ecological Protection.

Certain protections now afforded the White Goat Wilderness would be extended throughout the natural watershed. The high mountain ridge on the south, west and east further protects the resource as well as molds the area into a natural unit having only one low level access corridor. Certain unique natural features (Wapateehk Canyons, Landslide Lake Area) are worthy of natural area designations and would be further protected within such a proposed park. Resource developments would not be allowed.

### 2. Use

Use would be limited in such a Class D park (Natural Environment Recreation Area) to most primitive, non-motorized recreations. Developed facility oriented recreation would not be allowable. A wider range of activities than allowed in the White Goat Wilderness would be acceptable, namely fishing and horse use. Hunting, however, would be eliminated and the value of game for appreciative viewing is emphasized. Hunting-hiking conflicts would be eliminated. Use of the area would complement that of the adjoining national park and wilderness area.

### 3. Regional Systems

The proposed park area would cater to those uses intermediate on the legal wilderness-developed recreation continuum. It would help satisfy certain present Alberta provincial park system deficiencies of (a) lack of parks encompassing the alpine ecosystem, (b) lack of parks for primitive, non-developed recreations, (c) lack of parks of a large size. Furthermore, it would complement the established regional recreation systems of Alberta's east slope. The watershed is ideally located in an area facing future increases in recreational usage. It would be Alberta's largest provincial park, exceeding Cypress Hills by some 8,000 acres, and substantially increase the total acreage of land held under the provincial parks system.

### 4. Legal.

Because the area is presently uncommitted crown land, provincial park designation would be a simple matter. Budget constraints

would not be a barrier to incorporation of the area into the parks system as no land purchase is involved. Administration of the area would be similar to the present and retain most management objectives of the area's past twelve years. There are advantages to designating the Landslide Lake Area and Wapateehk Canyons as Natural Areas (Class C park) within the proposed Wapateehk Provincial Park.

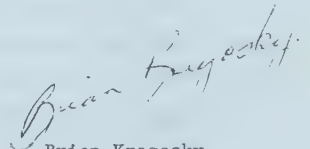
## 7. CONCLUSION

The south drainage basins of the Cline River comprise a natural unit which has demonstrated excellent potential for primitive outdoor recreations. This 90 square mile area, recently deleted from the White Goat Wilderness and corresponding legal protection, has little suitability or feasibility for commercial resource development and is currently undesignated crown land. Because of its strategic regional location in terms of both present recreational land systems and future use volumes, its recreational resource and its present availability, this writer recommends the establishment of the area as a Class D provincial park. Such a classification would protect the natural landscape while allowing certain non-conflicting uses to be carried out.

A classification as Wapateehk Provincial Park is thought to be more realistic, in terms of allowed uses, than wilderness designation. It is, however, sufficiently protective for retention of the natural resource and protection of the landscape.

Such high quality public land should be allocated to the best public use. It is proposed that the south Cline area's best use and value to the public of Alberta can be realized by provincial park designation.

This dual proposal, submitted to the E.C.A. East Slope Hearings, asks for consideration by the Government of Alberta in appraising the worth of its arguments, and consequently, the worth of the proposed concept of a Wapateehk Provincial Park.

  
Brian Kregosky

APPENDIX

Proposal: Designation of WAPATEEHK CANYONS NATURAL AREA  
Designation of LANDSLIDE LAKE NATURAL AREA

The proposal seeking designation of the above two natural areas is the following correspondence recently forwarded to the Natural Areas Committee, Department of Lands and Forests.

It is considered self-explanatory and sufficient for the purposes of these Hearings.



DEPARTMENT OF GEOGRAPHY

June 30, 1973

Natural Areas Committee,  
Department of Lands and Forests,  
Dr. A. Warrack, Minister,  
Legislative Buildings,  
Edmonton.

Natural Areas Proposal  
Wapateehk Canyons, Landslide Lake Area

Messrs. Smith, Wishart, Yule, Rushton, Forbes, Raszewski:

I would like to propose two natural geologic areas as worthy of your consideration for possible designation as Natural Areas under the Parks Act (Ch. 288, sec 8(a)i).

As the revised 1973 Parks Policy (Position Paper #13) contains no mention of natural areas it is assumed that the 1967 Policy Statement's definition is still applicable and that (a natural area) is... "a unique natural area of outstanding scenic quality or a natural feature of special interest such as a river canyon... unique geological feature, etc. The purpose would be to preserve the area or feature in the natural state for viewing and interpretation in an appropriate manner."

The proposed Wapateehk Canyons and Landslide Lake Area, I feel, satisfy the above criteria being of geologic, scenic, and interpretive value and interest. Both are located in the Cline River drainage there being no other designations or conflicting land uses at present. They formerly, as part of the White Goat Wilderness, received protection from consumptive land uses. Since the passage of the Wilderness Areas Amendment Act—these undesignated landscapes are now available crown land and the 'controlled buffer' zoning has not been applied (T.A. Drinkwater, personal correspondence, April 6). Geological uniqueness aside, these features are further enhanced by the surrounding wild scenery that would suffer deterioration with certain land uses. Proximity to the David Thompson Highway-Abraham Lake corridor and proposed resort developments further indicate designation before the expected recreational use increases subordinate the resource.

The canyon complex, as yet unnamed, has also been proposed to the Geographic Board of Alberta.

...2

The two proposed areas are also located within a proposed Wapateenk Provincial Park to be presented by this person to the E.C.A. East Slope Hearings. If future-feasible this concept of designated natural areas within a provincial park would offer complementary benefits and be yet another reason for wise preservation and management of unique areas.

I hope that these proposed areas will be worthy of your consideration and of natural area status.

I will be pleased to assist with additional details if necessary.

Sincerely,

*B. Kregosky*

Brian Kregosky.  
Graduate Student

Proposed Natural Area  
Wapateehk Canyons

Location

52° 09'N., 116° 30'W.

area upstream and downstream from Cline River-Coral Creek junction

Description

.area of 1.25 mile radius containing three canyons

-Cline River Canyon-2.25 miles in length, estimated depth over 200 feet, displays open and closed features.

-Cave Creek Canyon--500 yards long, estimated depth 75 feet, narrow and pot-holed.

-Coral Creek Canyon-1.0 mile, approximately 200 feet maximum depth.

-open, fossilized slabs at north end and narrow pot-holed chasm at the juncture with the Cline River Canyon.

.trails parallel these canyons on both sides of the Cline River

Special Features

.entrance to Coral Canyon is a striking cliff portal

.large, fossil features on slabs of Coral Canyon

.a few remnant Douglas Fir grow on Cline Canyon

.all canyons exhibit narrow gorge and pot-holes

.it is rare to find so many canyons adjoining one-another

Historical

.historic 'Old Cline's Trail' (re: Hector, Palliser Expedition, September 18, 1858) runs along the north bank of the Cline River.

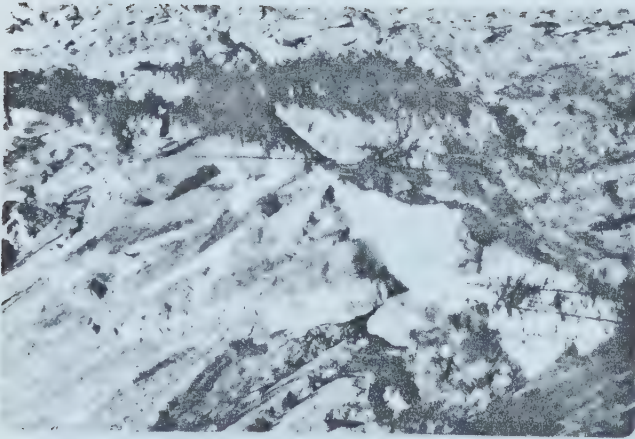
.Earl of Southesk passed Coral Canyon in 1859

The Name

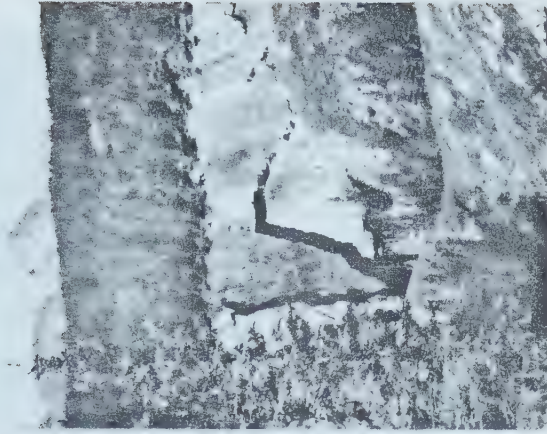
.Cline River was originally Wapateehk (Stoney Indian for white goat) according to Hector and was named as such on the map of the Palliser Expedition. It was later Anglicized to White Goat and finally to its present name.

.name proposed to Geographic Board of Alberta, May 25, 1973



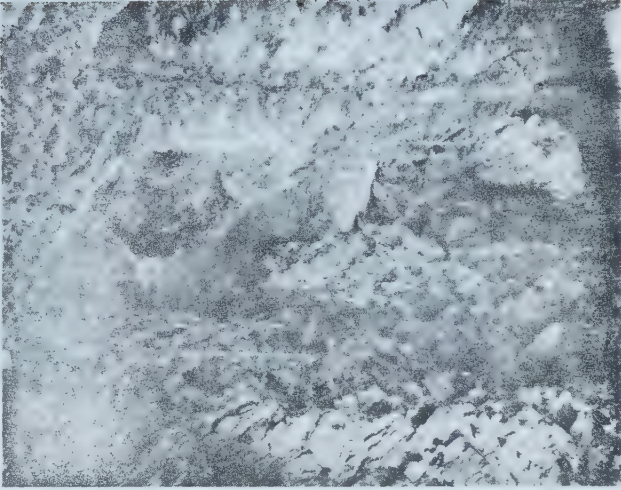


Bottom view of upper Coral Canyon. Numerous waterfalls and scattered pine are located throughout the canyon.

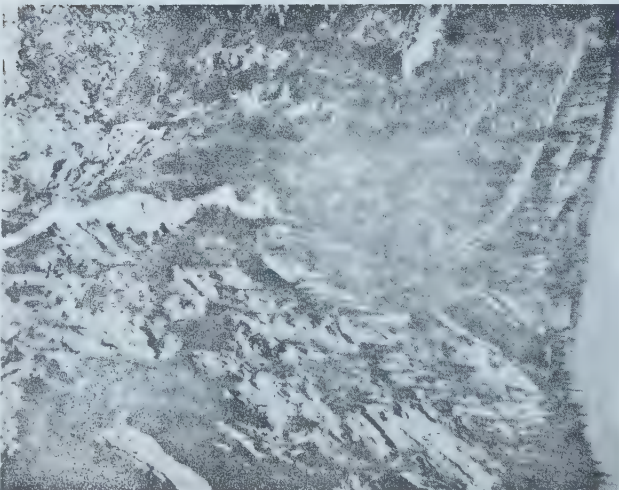


Fossilized, massive west slabs of upper Coral Canyon. View from trail south-west to distant Mt. Gline.

Cline Canyon-open section below Coral-Cline junction. A few remnant Douglas fir are located in this area.



Coral Canyon looking south. Note strata dip similar to upstream slabs.



Proposed Natural Area  
Landslide Lake Area

Location

42° 00' N., 121° 10' 30" W.

area to north and north-east of Landslide lake

Description

rockslide debris, originating from nearby east slopes and covering approximately one-half mile (1/4 section in area). much of slide is now treed but there are sections of bare, very large rock blocks (see forest inventory maps).

probable cause for creation of Landslide lake.

lake outlet is underground drainage for one-half mile because of slide.

surrounding basin is very scenic and is enclosed by mountains up to 9,000 feet, on three sides. West of basin above the lake is rockland.

a rough trail from Cline Crossing leads to this area while untrailed access, cross-country, is possible from Whirlpool Point on the David Thompson Highway.



Landslide Lake. View south to ridge divide (3.5 miles) which was original boundary of White Goat wilderness. This very scenic locale offers future fishing potential. Lichen covered rockslide blocks at bottom extend one-half mile north.

LAND USE AND RESOURCE DEVELOPMENT  
IN THE EAST SLOPES OF ALBERTA

A Brief Submitted by:  
THE DEPARTMENT OF THE ENVIRONMENT OF CANADA

For:  
PUBLIC HEARINGS, held by the  
ALBERTA ENVIRONMENT CONSERVATION AUTHORITY  
JULY, 1973

Presented By: Dr. G.T. Silver

CONTRIBUTORS

CANADIAN FORESTRY SERVICE - Lead Agency

CANADIAN WILDLIFE SERVICE

INLAND WATERS DIRECTORATE

FISHERIES AND MARINE SERVICE

FISHERIES RESEARCH BOARD

ENVIRONMENTAL PROTECTION SERVICE

ATMOSPHERIC ENVIRONMENT SERVICE

## CONTENTS

	Page
I. INTRODUCTION.....	898-28
II. INFORMATION AND PRINCIPLES RELEVANT TO LAND USE AND RESOURCE DEVELOPMENT.....	898-29
1. CLIMATE.....	898-29
2. LAND AND SOIL.....	898-30
3. WATER RESOURCES.....	898-32
4. WATERSHED MANAGEMENT.....	898-34
5. FORESTRY.....	898-35
6. FISHERIES.....	898-38
7. WILDLIFE.....	898-39
8. OUTDOOR RECREATION.....	898-41
III. RESOURCE ALLOCATION AND ASSESSMENT AND EVALUATION OF THE IMPACT OF DEVELOPMENT.....	898-42
1. ECONOMICS.....	898-42
2. ENVIRONMENTAL IMPACT.....	898-44
IV. RECOMMENDATIONS.....	898-46
1. RESOURCE INFORMATION.....	898-46
2. RESEARCH.....	898-47
3. POLICY CONSIDERATIONS.....	898-47
4. RESOURCE MANAGEMENT PLANNING & OPERATIONS.....	898-48
5. IMPACT OF LAND USE AND RESOURCE DEVELOPMENT.....	398-50



## LAND USE AND RESOURCE DEVELOPMENT IN THE EAST SLOPES OF ALBERTA

## I. INTRODUCTION

The main objective of this brief is to discuss physical and biological information and principles relevant to land use and resource development in the East Slopes, economic criteria for assessing land use alternatives, and mechanisms for assessing and controlling the environmental impact of developments. More detailed information is available in background papers which are being submitted separately.

The area of reference is that portion of Alberta lying between 49° and 55° north latitude, west of the fifth meridian. Regional implications are much broader, however, particularly with respect to water resources. This larger region of influence includes the Saskatchewan-Nelson River system in the south and the Mackenzie River system in the north. Of the five watersheds defined for the hearing, the Oldman, Bow and North Saskatchewan are major headwaters of the Saskatchewan-Nelson River system, and the Athabasca and Smoky are significant headwaters of the Mackenzie River system. There are international implications since the Saint Mary River, an international stream, lies in the Oldman watershed.

The Department of the Environment of Canada performs functions which are of value to those responsible for land use and resource development in the East Slopes. These include research in physical and biological sciences and economics, resource inventories and surveys, data collection and analysis, management and consultative services in forestry, wildlife, fisheries and water, and environmental impact studies, pollution assessment and control.

II. INFORMATION AND PRINCIPLES RELEVANT  
TO LAND USE AND RESOURCE DEVELOPMENT

1. CLIMATE

The Department of the Environment of Canada conducts meteorological data acquisition programs, processes and archives these data, and provides regional climatological reports and data summaries relevant to the East Slopes region. Although there is a total of 158 meteorological stations in the broad region of concern, in the central and northern forests the network density is very low and many existing climatological stations operate for only part of the year. Land use planning and management programs would be aided by allocating additional resources to the Alberta Forest Service to operate a selected number of its climatological stations on a year-round basis.

The climate of the East Slopes is conducive to recreational activities in all seasons. The heaviest rainfalls in the region occur along the most easterly range of mountains. Proper land use planning is of the utmost importance to realize optimum benefit from this water source. There is a high degree of variability in local climate due to the complex nature of meteorological phenomena, the natural variability of climate, and the topography. Although climatic features such as the chinook are well known in general terms, much remains to be learnt about the meso-scale structure and especially the effects of such features on land use.

There is evidence that the air pollution potential in the area is high due to prevailing meteorological conditions. The effects of topography compound the problem and special precautions should be taken with chimney design for industrial facilities in East Slopes valleys.

By good land use planning, utilizing meteorological data, it is possible to avoid unnecessary expenditures in design of various facilities, in repairs to buildings, and in snow removal. Most important however, is the opportunity to minimize the ill effects on the environment of facilities or uses and gain optimum benefit from the desirable features of local climate.

The absence of specific, applicable meteorological information in a proposed development area should not be sufficient excuse for proceeding without regard to the hazards involved. Once a general development area is recognized, then meteorological observations and expertise should be obtained and utilized in the land use planning process.

## 2. LAND AND SOIL

Information on land and soil and its interpretation for specific uses is important for land use and resource management. Soil survey data are available for only 60 per cent of the East Slopes region. Soils information for the remainder of the area is limited to that provided by the Canada Land Inventory (C.L.I.), which is inadequate for most development and management planning.

The production capability for agriculture, forestry, recreation, wildfowl and wild ungulates for the approximately 33,000 square miles of land in the East Slopes has been recorded by C.L.I. Limitations for

agriculture are particularly severe. The ratings for recreation, though relatively low on the national scale, are relatively high in a provincial context. C.L.I. data are being translated into a form useful for planners by two departments of the provincial government.

Among the factors affecting land use in the East Slopes are physiography, location and accessibility, soil characteristics, and degree of dissemination of current knowledge.

Physical features can be assessed and compared by physiographic province and the suitability and limitations of different land units, such as mountainous areas, can be derived for specific land uses.

Demand for land is increasing rapidly in the East Slopes and will increase as accessibility improves. The geographic location of the region suggests that land use and resource development policies should recognize existing policies on provincial land and adjacent National Parks land in order that a comprehensive plan for the larger region may be realized.

Soil characteristics deserve special consideration in land use plans. A dry, well-drained soil may appear to be ideal for a campground but could pose a serious water pollution hazard because of sub-surface drainage. Detailed soil surveys are needed to supply such information.

The degree of dissemination of current knowledge about land, soil and other resources in the East Slopes has a major impact on land use, and efforts should be made to increase the availability of such information to the public and potential developers.

### 3. WATER RESOURCES

Streamflow gauging in the East Slopes region is conducted by the Department of the Environment of Canada, under agreement with the Province of Alberta. A total of 80 gauging stations are operated directly within the region and another 30 sites are gauged in the near vicinity. In addition, a large number of gauges are operated at sites far removed from the region on streams that derive most of their flow from the East Slopes. The data from these are used to complement the gauging station network in the assessment of available water supply and streamflow forecasting.

The streamflow monitoring program provides an inventory of the available water resources within the East Slopes. Data on the availability of water supplies within each region or basin are useful in designing structures located on, or crossing, rivers and streams. Peak flow information is invaluable in culvert and bridge design and in selecting camp shelter and recreational sites. The availability of water is a limiting factor in the location of industrial plants. If only a small amount of water is available within a basin it will preclude the establishment of industries which require large volumes of water, or of human settlement with water demands for sewage treatment and disposal.

The Department also undertakes the systematic measurement of sediment discharge on some streams in the East Slopes. The sediment network is much smaller than the hydrometric network as only a dozen sites within the area are monitored for sediment discharge.

Water quality information on the East Slopes dates back to 1963. The information accumulated is for an area extending from the Oldman River drainage basin in the south to the Athabasca River drainage basin in the north and includes the Streeter, Marmot, Deer Creek and Tri-Creek Research Basins. In addition, 13 stations on the headwaters of streams of the Saskatchewan River system are monitored.

The characteristics of these streams dictate a varied sampling frequency which ranges from twice weekly to once every two months. To adequately monitor changes which may occur as a result of further development in this area, the number of stations and sampling frequency would have to be increased. Currently, all samples are being analyzed for major ions, physical parameters, and seasonally for heavy metals.

At least to the extent that it affects streamflow, management of the resources of the East Slopes area has an impact in the three Prairie Provinces and in the Northwest Territories.

Recognition of the regional importance of streamflow in the Prairie Region is manifest in the Master Agreement on Apportionment by which Canada, Alberta, Saskatchewan and Manitoba agree to apportion the flow of interprovincial streams in the Prairie Provinces. The Prairie Provinces Water Board has been established to administer the agreement. The Master Apportionment Agreement also concerns the quality of water in interprovincial streams.

Extensive studies have been completed or are at present under way concerning the potential for large scale water development projects



to increase the available supply of water in the Prairie region. These investigations included potential water storage and diversion projects in the East Slopes region. If, in future years, the need for supplies of water in the Prairie region increases it may be necessary to develop some of this potential. Before decisions are made to develop any of these storage or diversion projects, much more must be known about their potential environmental impact. A program to obtain background information to provide an understanding of the physical and biological processes involved should be initiated now to facilitate a proper assessment of environmental impact.

#### 4. WATERSHED MANAGEMENT

All land upon which precipitation falls is watershed and is amenable to management for controlling the amount, timing and quality of water yield.

The intensity of management required to maintain the vital watershed role of lands within the East Slopes varies within the region, and should include:

1. Protective management to maintain the health of the vegetative cover and the current natural amount and quality of water produced, preserving options for future development and management commensurate with the watershed role.
2. Development and management for the purpose of producing goods and services such as timber, minerals and recreation opportunities, with special consideration in planning for the effects of such activities upon the amount and quality of water produced from the area.

3. Management for the primary purpose of optimizing the timing and/or quality of the water yield.

Land management is a viable means of increasing water supplies in the East Slopes and may increase yields by as much as 20 to 50 per cent. Watershed management is needed to maintain the quality and yield of water in a watershed and should be considered as an alternative or complement to engineering works for purposes of altering the timing and amount of water supply. Hydrologic simulation modelling is currently underway within the Alberta Watershed Research Program to produce a computer model which will relate water yield to land use pattern.

Five watershed zones can be recognized in the East Slopes. The probable changes which could be effected in these zones by management are related to the total water yield, timing of yield, and the vegetation-topographic configuration of the watershed.

The sub-alpine Spruce-Fir vegetation zone has the highest management potential for augmenting total flow and, except for the Alpine zone, is the only area with potential for augmenting late streamflow.

All land-based operations in the East Slopes should be carefully examined with respect to their ultimate effect on water and water users, both on-site and downstream.

## 5. FORESTRY

The East Slopes region is characterized by even-aged coniferous forests, the most prominent species being lodgepole pine, white spruce,

Engelmann spruce and alpine fir. This forest, represented by the Crowsnest, Bow, Clearwater-Rocky, Edson, Whitecourt and Grande Prairie Provincial Forests comprises approximately 39 per cent of the total provincial forest acreage and 46 per cent of the total provincial forest volume. The area contains 53 per cent of provincial coniferous forest volume, 73 per cent of which is in the Edson, Whitecourt and Grande Prairie Forests.

The allowable cut for the East Slopes (the amount of wood which can be harvested annually, under management, in perpetuity), based on conifers alone, is approximately 56 per cent of the provincial total. At present about 72 per cent of the entire provincial forest harvest is allocated within the East Slopes forest, 90 per cent of it within the Edson, Whitecourt and Grande Prairie Forests.

In 1970-71 the East Slopes forest produced about 59 per cent of the total provincial forest products revenue, 75 per cent of it from the Edson, Whitecourt and Grande Prairie Forests.

The relative importance of the Edson, Whitecourt and Grande Prairie Forests for commercial wood production is likely to increase in the future because they contain a high proportion of productive forest land suitable for mechanized forest harvesting, as well as approximately 7 billion cubic feet of deciduous wood volume still largely uncommitted to harvest.

There is a particular need for a re-inventory of forest land because the original inventory is out-dated and traditional forest inventory data are inadequate for future land use planning needs. Inventory systems which take account of forest productivity, land

stability, forest distribution, accessibility and potential conflict areas are available. This type of inventory, combined with the use of available computer systems for comparing and analyzing land use alternatives should be considered now for future land use planning in the East Slopes.

The development of silvicultural principles to achieve management objectives for non-fibre uses such as water, wildlife and recreation, has received little attention to date. Particular stress should be placed on "multiple" or "integrated" use of forest land in future planning and management.

Clearcutting can be expected to cause considerable conflict between commercial timber production and other uses of forest land in the future unless special attention is paid now to ways of avoiding or minimizing its effect. This should include examination of alternative silvicultural systems and logging equipment, as well as modifications in the timing, size, shape and distribution of clearcuts. Alternatives to clearcutting could be applied now in some sub-alpine spruce-fir forests and future forests could be designed using a variety of species, age and spacing arrangements particularly when forests are to serve a primary role other than commercial fibre production.

It appears that future commercial timber production in the East Slopes will be most feasible on productive forest lands suitable for mechanization. These lands are primarily in the Edson, Whitecourt and Grande Prairie Forests. A trend toward long-term commitment of these lands to commercial forest production is already established. Coincident with the above, increasing demands for forest land for purposes other than commercial timber production may well be met to a large extent

from low-production lands and lands unsuitable for mechanized forest harvesting, which describes most of the mountainous area and a large proportion of the East Slopes south of the Edson Forest.

## 6. FISHERIES

The fisheries of the East Slopes are almost exclusively sport fisheries for trout and whitefish. These fish, particularly such species as cutthroat and golden trout, are extremely vulnerable to both habitat disruption and overfishing.

Mountain areas in their natural state produce clear, cool, relatively productive streams and deep, cold, oligotrophic lakes; both of these water types are ideally suited for sports fishing use, but they are also vulnerable to disruption. Resource development on the watershed can rapidly alter the vegetation cover and increase temperature and turbidity of lakes and streams; poor forestry practices such as clearcutting along streams and dragging in stream beds, seismic exploration, and surface mining, can have deleterious effects on the water quality of mountain areas.

There is a potential for hydro-electric power dam construction on some headwater streams which could have serious effects on aquatic regimes both above and below the impoundment. Roads in mountain areas are usually built in stream valleys. There is ample evidence of the effects of dam and road construction and associated stream channelization upon the fishery in other areas to require close scrutiny of development plans on the East Slopes.

While the stocking of fish for recreational use is a recognized and much used method of maintaining fish populations, certain factors should be considered:

- a) Sport fisheries generally are best managed on a sustained yield basis without artificial propagation. Enlightened fisheries management programs can produce quality sports fishing without endangering local stocks through fish introductions.
- b) Exotic species should be stocked only if no native species can be used.
- c) The introduction of fish diseases via planting programs is a very real possibility. The effects of such diseases can extend across park, provincial, and even national boundaries. The valuable headwaters in the East Slopes can be kept disease-free by proper management of native stocks, thus reducing the need to introduce fish into headwaters.

Improved access to lakes and streams in the East Slopes would be desirable to provide the fullest possible public benefit from the angling potential of the region. Agricultural, forestry, and other industrial or development leases should be examined for their effects on public access.

## 7. WILDLIFE

The East Slopes region possesses a biotic diversity found nowhere else at the same latitude in North America. Here the prairie grasslands, parklands, montane and boreal forests, alpine tundra and several intermediate types are found in relatively close association. The region supports an unusually rich variety and abundance of wildlife which is an inherent part of the character of Alberta. For example, seven of Alberta's nine native ungulates occur in the region, and several species reach their greatest abundance there. At least 135 bird species are also present in the region.



Wildlife population levels are closely linked to the quantity, quality and interspersed of habitat components. Existing and potential land use practices such as livestock grazing, extensive forest clear-cutting, strip mining, intensive recreational development and pesticide application can greatly reduce the productive capability of these ecosystems for wildlife. On the other hand, carefully planned, integrated land use can maintain or even improve wildlife production on these lands. In addition, the inclusion of wildlife in a management plan adds planning flexibility because of their short-term reproductive potential.

Wildlife populations, for which the adjacent National Parks have become so well known, are partially dependent on habitats in the East Slopes. Many "park" ungulates such as elk and bighorn sheep winter on restricted ranges in the East Slopes and numerous wide-ranging but rare carnivores such as wolves and grizzly bears move regularly back and forth. Close federal-provincial consultation is necessary for managing these transient populations. Land use practices immediately adjacent to National Park boundaries could adversely affect the role of the National Parks as wildlife reservoirs from which utilized provincial stocks may be replaced.

Water diversions or impoundments in the East Slopes can affect waterfowl and other wetland wildlife associated with prairie river valleys and northern river deltas through subtle alterations of habitat.

Several studies have been conducted in Alberta on the economic value of wildlife. Results indicate that the fish and wildlife resources make a significant contribution to local and regional economies in terms of both tangible and intangible benefits. Wildlife is particularly important as a non-consumptive recreational resource.

Although this presentation has singled out only a few wildlife species in the East Slopes many others such as upland game birds and fur bearers also play a vital role in the region's ecology and natural history. One factor common to most of the wildlife inhabiting the East Slopes is the many unexplored relationships between the species and their environments. More must be known about these associations before the potential environmental impacts of resource development can be adequately assessed.

#### 8. OUTDOOR RECREATION

Tourism is a major industry in Alberta and outdoor recreation is a major tourist activity. Expenditures in Alberta by Canadian tourists alone totalled over 240 million dollars in 1971 and for 1972 expenditures of all tourists exceeded 300 million dollars. The proportion of this business accruing to the East Slopes is unknown but probably substantial. An explicit economic analysis of recreation in the East Slopes will become increasingly important in the future for purposes of comparison with other land use alternatives during development planning. A recreation inventory designed for development and management planning is necessary to supplement available C.L.I. information.

The provincial government currently provides approximately 85 per cent of all outdoor recreation facilities in the East Slopes. Use of Provincial Parks in the East Slopes increased by over 260 per cent from 1965 to 1970. In 1970-71 Provincial Parks accommodated an estimated  $1\frac{1}{2}$  to 2 million people on a day-use basis and recreation sites outside Provincial Parks provided for about  $\frac{1}{2}$  million visits. Approximately 50 per cent of these visits were family outings with picnics and enjoyment

of the scenery as major objectives, 25 per cent were fishing trips and 25 per cent hunting trips. Demand for outdoor recreation facilities continues to grow rapidly.

Within the East Slopes, activities which alter or destroy soil, flora, wildlife habitat, water courses, or air quality, or which reduce the aesthetic appeal of the landscape have the greatest potential for conflict with outdoor recreation and require planning and monitoring to prevent or reduce conflicts. There is a special need for more rigid control of mineral exploration. New exploration techniques, especially a substitute for broadcast bulldozing as a means of coal exploration and for conventional seismic surveys for oil and gas would be particularly beneficial from both land management and aesthetic points of view.

Planning methodologies now exist for purposes of demand derivation, investment and management planning, and evaluation of alternative policy decisions on recreation in the East Slopes. A clear policy is essential to reaching development goals which are in the best interests of the public.

### III. RESOURCE ALLOCATION AND ASSESSMENT AND EVALUATION OF THE IMPACT OF DEVELOPMENTS

#### 1. ECONOMICS

Historically, public land allocation decisions have been made mainly on the basis of conjecture, intuition, and pressures exerted by special interest groups. An ad hoc approach to decision-making may have been adequate in the past but senior levels of government now recognize

the need for more comprehensive and factual information upon which to base land allocation decisions. Such information and decision-making should be based upon integration and interpretation of physical, biological, social and economic factors.

The East Slopes of Alberta is a region of diverse natural resources, both renewable and non-renewable, capable of providing a vast array of goods and services. An understanding of the capability of the resource base to provide alternative uses, the possible range and "output mix" of joint products, and the impact of one use on another is essential for effective decision-making, especially since allocation decisions may be irreversible and place serious constraints on future land use options.

Resource evaluation should begin with physical and biological information pertaining to the East Slopes. An inventory of natural resources, their locations, and alternative uses is a first step. Once this information is gathered, and physically and biologically feasible alternative resource use patterns developed, comprehensive social and economic evaluation can commence.

In public land use planning, both past and present, little emphasis has been placed upon extensive economic analysis and interpretation of conflict situations. Neither physical nor biological data are adequate in themselves for making decisions about resource allocation. Current planning systems commonly use subjective weighting scales to equate different units of productivity, ignoring pertinent economic trade-offs,

and thereby risking inefficient resource allocation. Economic analysis can help in planning the orderly development and use of natural resources, and can be particularly useful in helping to resolve conflicts between different resource uses.

Public policy is needed to support planning and implementation of land use and resource allocation in the East Slopes. In the absence of explicit policy to the contrary, emphasis tends to be placed on developments with direct market value, at the expense of those with indirect or long-term social value.

## 2. ENVIRONMENTAL IMPACT

Assessment and control procedures can be employed in the design and planning of resource development projects to reduce adverse environmental effects.

In impact assessment, the structure and function of natural ecosystems are investigated to identify factors of concern and to guide the design of developments accordingly, as exemplified by the Mackenzie Valley Pipeline Study and highway assessments undertaken by the Department of the Environment of Canada.

Aspects of proposed developments that are known to cause measurable changes in such major elements of an ecosystem as population size or productivity should be met with design recommendations that will minimize undesirable impact.

The value of impact assessment in land use planning and resource allocation is limited unless it precedes and is integrated with project execution. Assessment should start with primary impact events and the

biological receptors in the immediate vicinity and extend to secondary receptors.

More ecological impact studies should be done in concert with industrial activities to elucidate cause-effect relationships between actions and the structure and function of specific ecosystems.

Environmental protection guidelines should be formulated for common development projects, perhaps around a given land use or management objective.

The following points are stressed in relation to environmental impact assessments:

1. Ecological impact assessment and control procedures for the East Slopes region should be clarified.
2. Procedures for impact assessment and the preparation of ecological impact statements should take into account mechanisms being developed or applied in other parts of Canada and the United States.
3. Impact assessments should be undertaken during all stages of project development, i.e. planning, execution, and operation.
4. Impact statements should be prepared by qualified environmental consultants, government agencies, or industries, and reviewed by control agencies or groups not directly involved in the development or financial aspects of the proposal.
5. Impact statements should include considerations of all present legislation, guidelines, and criteria that apply to given proposals and the controls required to adhere to them should be stated.



6. Impact studies, statements and agency reviews should all be made public prior to the initiation or expansion of major projects in the East Slopes.

#### IV. RECOMMENDATIONS

The following recommendations are offered for consideration by authorities responsible for policy, planning and management of land and resources in the East Slopes.

##### 1. RESOURCE INFORMATION

In general, the existing inventory of resources is sufficient for a broad understanding of the region. However, for purposes of specific land use development decisions and for monitoring changes related to development there is insufficient or inadequate information in the following areas:

- a) The number of year-round climatological, hydrometric and water quality monitoring stations, especially in mountainous areas and in the central and northern forests of the region is inadequate.
- b) Necessary soil survey data on 40 per cent of the area, primarily in the sub-alpine and alpine areas, is non-existent.
- c) There is a need for a more comprehensive recreation inventory, including a supply-demand study, designed to guide planning for recreation development.
- d) A re-inventory of forests with special emphasis on accessibility, land stability and productivity would be desirable.

## 2. RESEARCH

Research which would support or improve land use and resource development planning in the East Slopes includes:

- a) Further studies of chinook winds, precipitation and air pollution potential, particularly with respect to the location of industrial and recreational facilities.
- b) Investigations of the inter-relationships between wildlife communities and habitats, to facilitate assessment of the impact of developments upon wildlife.
- c) Studies of alternatives to broadcast bulldozing as a means of discovering or proving surface coal deposits, and of conventional seismic operations for oil and gas surveys.
- d) Special investigations of resource use conflicts and "trade-offs" between uses in order to improve the factual basis for resource use planning and management decisions.

## 3. POLICY CONSIDERATIONS

Considerations pertinent to land use policy for the East Slopes include the following:

- a) A thorough knowledge of current policies and practices and future plans for adjacent Provincial and National Park lands and the development of comprehensive co-operative policies for all contiguous lands in the region would be most beneficial.
- b) Clarification of policy on public access to and within Crown land would be desirable, particularly with respect to hunting, fishing and other recreational pursuits.

- c) Special consideration should be given to long-term costs and benefits of resource development as they may otherwise get too little attention prior to development. A more extensive use of economic analysis and interpretation in resource allocation decisions would be desirable, with emphasis on comprehensive cost-benefit analysis. When resources such as wildlife habitat or aesthetic values cannot be quantified precisely, "safe minimum standards of conservation" could be adopted to minimize resource losses and maintain options for the future.

#### 4. RESOURCE MANAGEMENT PLANNING AND OPERATIONS

The following deserve special consideration in both management plans and on-site operations in the East Slopes region.

- a) Primary consideration should be given to managing the land to maintain or improve the yield and quality of water, with full recognition that watershed values and management needs vary widely within the region. All land-based operations should be examined for their effects upon water and water users from local, regional and inter-provincial points of view. Good water resource management is in most ways compatible with good fisheries, wildlife and forest management. However, generalized "watershed considerations" in themselves should not be used as justification to include or exclude other land uses. Each should be judged on its own merits and in relation to other uses.
- b) Both engineering works such as reservoirs and water diversion, and management of vegetation on the watershed itself should be given consideration as means of altering the timing or quantity of water produced.

- c) The risk of introducing fish disease through fish planting programs should be realized, and headwaters fishery management without fish planting should be favored.
- d) Close federal-provincial co-operation should be maintained in the management of wildlife which migrates between provincial and National Parks land in the East Slopes.
- e) Silvicultural principles for forest management should be applied to meet specific management objectives for water, wildlife and recreation. The achievement of necessary land use objectives will usually require some manipulation of the land, the effects of which should be anticipated in planning. Special efforts should be made now to limit the conflict between clearcutting forests for commercial wood production and other forms of forest land use. Alternatives to clearcutting and to current logging equipment exist at present for some areas, and future forests can be designed using various species, ages and spacing arrangements, particularly where forests are to serve a primary purpose other than commercial fibre production.
- f) Available planning information on climate, soils, water and forest vegetation should be disseminated more effectively to planners and developers and where gaps in such information exist for a specific area, new surveys and consultation with specialists should precede planning and development.

- g) The best policies and plans will be ineffective unless they are applied with adequate funds and staff, at the management and operational phases of land use.

5. IMPACT OF LAND USE AND RESOURCE DEVELOPMENT

- a) Potential environmental impact should be studied prior to developments such as industrial sites, reservoirs, roads, stream channelization, and recreation areas.
- b) There is a need for clarification of ecological impact and control procedures applicable to the East Slopes. Impact statements should be reviewed by agencies or groups not directly involved in the proposed developments.

Background papers to the brief presented by Canada Department of the Environment have not been reproduced in these proceedings, however the papers are available in the Information Center, Environment Conservation Authority, 9912-107th Street, Edmonton, Alberta. For your information a listing of these reports is included in the next three pages.

LAND USE AND RESOURCE DEVELOPMENT  
IN THE EAST SLOPES OF ALBERTA

BACKGROUND PAPERS TO A BRIEF  
PRESENTED BY  
THE DEPARTMENT OF THE ENVIRONMENT OF CANADA  
TO PUBLIC HEARINGS HELD BY THE  
ALBERTA ENVIRONMENT CONSERVATION AUTHORITY  
JULY, 1973



CONTENTS

	<u>Page</u>
A. INTRODUCTION .....	1
B. ECONOMICS .....	1
1. DEFINING THE PROBLEM .....	1
2. ECONOMIC EVALUATION AND LAND USE PLANNING .....	3
C. LAND AND SOIL OF THE EAST SLOPES REGION .....	11
1. BACKGROUND INFORMATION .....	11
a. CANADA LAND INVENTORY .....	14
2. LAND USES .....	16
a. AGRICULTURE .....	16
b. OTHER LAND USES .....	17
3. SOME FACTORS AFFECTING LAND USE .....	21
a. LOCATION .....	21
b. PHYSICAL FACTORS .....	22
c. HUMAN FACTORS: (POLICY AND THE APPLICATION OF KNOWLEDGE) .....	25
4. INTERPRETATION OF PRESENT KNOWLEDGE .....	26
a. SOIL .....	26
b. RESOURCE ALLOCATION STUDIES .....	29
5. FUTURE PLANNING AND DEVELOPMENT .....	30
D. THE CLIMATE OF THE EAST SLOPES .....	31
1. METEOROLOGICAL STATIONS .....	31
2. CLIMATOLOGICAL SUMMARY .....	31
a. GENERAL .....	31
b. CHINOOK WINDS .....	38
c. PRECIPITATION .....	40
d. AIR POLLUTION POTENTIAL .....	41

CONTENTS

	<u>Page</u>
3. USE OF METEOROLOGICAL INFORMATION IN LAND USE PLANNING .....	44
4. USE OF METEOROLOGICAL DATA IN URBAN PLANNING .....	46
E. THE WATER RESOURCES OF THE EAST SLOPES .....	48
1. IMPLICATIONS OF USE AND MANAGEMENT .....	48
2. INTERPROVINCIAL SYSTEMS .....	49
3. WATER DATA NETWORKS .....	50
4. SOME MAJOR CONSIDERATIONS .....	53
a. WATER STORAGE AND DIVERSION .....	53
b. SEDIMENT LOAD .....	54
c. SEDIMENT LOAD CHANGES DUE TO RESERVOIR CONSTRUCTION .....	54
d. SEDIMENT LOAD CHANGES DUE TO BASIN DEVELOPMENT .....	55
e. WATER QUALITY .....	56
F. WATERSHED MANAGEMENT IN THE EAST SLOPES .....	59
1. MANAGEMENT OBJECTIVES .....	59
a. WATERSHED PROTECTION .....	59
b. WATERSHED "CONSIDERATIONS" .....	60
c. PURPOSEFUL WATERSHED MANIPULATION .....	60
2. REASONS FOR PRACTISING WATERSHED MANAGEMENT IN THE EAST SLOPES .....	62
3. WATER MANAGEMENT POSSIBILITIES THROUGH WATERSHED MANAGEMENT IN THE EAST SLOPES .....	65
4. PLANNING FOR A DESIRABLE WATER PRODUCT FROM THE EAST SLOPES .....	71

CONTENTS

	<u>Page</u>
G. THE FISHERY OF THE EAST SLOPES .....	72
1. SPORT FISHERY .....	72
2. WATER CONTROL .....	72
a. RESERVOIRS .....	72
b. DOWNSTREAM EFFECTS .....	73
c. CHANNELIZATION .....	75
3. WATER POLLUTION .....	75
a. MINES .....	76
b. INDUSTRIAL AND DOMESTIC WASTES .....	76
4. CONSTRUCTION .....	77
5. FORESTRY .....	78
6. PUBLIC ACCESS .....	79
7. FISH PLANTING .....	80
H. WILDLIFE IN THE EAST SLOPES .....	81
1. MIGRATORY BIRDS .....	83
2. UNGULATES .....	85
3. CONFLICTS AND COMPATIBILITY WITH OTHER USES .....	87
4. SOME ECONOMIC CONSIDERATIONS .....	90
I. OUTDOOR RECREATION IN THE EAST SLOPES .....	92
1. SUPPLY, DEMAND AND RECREATION PLANNING .....	94
2. CONFLICTS AND COMPATIBILITY WITH OTHER USES .....	95
3. SOME ECONOMIC CONSIDERATIONS .....	98
a. MONETARY APPROACH .....	99
b. NON-MONETARY APPROACH .....	101

CONTENTS

	<u>Page</u>
4. SUGGESTED IMPLICATIONS ARISING FROM DEVELOPMENT OF RECREATION OPPORTUNITIES IN THE EAST SLOPES .....	103
5. POLICY FORMULATION AND IMPLEMENTATION .....	106
J. FORESTRY IN THE EAST SLOPES .....	109
1. THE LAND AND THE FOREST .....	109
a. FOREST GEOGRAPHY .....	109
b. PHYSIOGRAPHY .....	111
2. FOREST STATISTICS .....	112
a. INVENTORY AND HARVEST .....	113
b. GROWTH AND DEPLETION .....	119
c. AGE .....	124
d. VALUE .....	125
3. MANAGEMENT, CONFLICTS AND COMPATIBILITY .....	127
a. PRESENT AND FUTURE MANAGEMENT .....	128
b. CONFLICT AND RESOLUTION .....	131
K. ECOLOGICAL IMPACT ASSESSMENT AND CONTROL IN THE EAST SLOPES .....	139
1. PRINCIPLES .....	139
2. SCOPE .....	142
3. ENVIRONMENTAL PROTECTION GUIDELINES .....	143
4. COMPONENTS OF ECOLOGICAL IMPACT CONTROLS .....	144
a. WATER QUALITY CRITERIA .....	145
b. AIR QUALITY .....	148
5. RECOMMENDATIONS ON IMPACT ASSESSMENTS AND STATEMENTS .....	149
L. ACKNOWLEDGMENTS .....	150

CONTENTS

APPENDIX I	SOME ECONOMIC EVALUATIONS OF SELECTED LAND USES IN SOUTHWESTERN ALBERTA
APPENDIX II	CANADA LAND INVENTORY LAND CAPABILITY DISTRIBUTION FOR THE EAST SLOPES AND CLIMATIC DATA FOR THE AREA
APPENDIX III	SOME IMPLICATIONS OF WIND, TEMPERATURE, HUMIDITY AND PRECIPITATION FOR LAND USE PLANNING
APPENDIX IV	GLOSSARY OF TECHNICAL FORESTRY TERMS
APPENDIX V	LOGGING SYSTEMS AND ALTERNATIVES IN THE EAST SLOPES

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

In discussions with various developers about reclamation, one of the essential elements that is missing is meteorology. Areas of the province differ meteorologically, especially in the foothills. Are there any plans to get some meteorological definition of that area?

DR. SILVER:

As far as I know there are no plans to set up a meteorological network that would cover the whole eastern slopes.

MR. KINISKY:

In the work of Environment Canada has anything been done to assign values to recreational use of land? You used the term "cost benefit". Is any information available that will give a dollar value for the benefits of recreational land?

DR. SILVER:

I believe there are general figures, but to my knowledge there have been no specific studies on this. I think this is one of the weak areas.

MR. KINISKY:

Naturalists tell us that exploration and development in the foothills scares the animals away from their habitat, and the industrialists tell us this is not true, animals are not at all disturbed. Can you resolve this difference of opinion?

MR. JOHN G. STELFOX: [From the floor]

Certain development does create harrassment to the animals and causes them to move away. In the Pembina-Brazeau area the seismic operations cleared either 11 or 13 per cent of the forest cover between 1956 and 1958, if I recall correctly. In the area west of Drayton Valley we had a good population of moose, deer and elk. Many moose and elk moved out of that area after the seismic work was completed because the roads were so close together that the animals could not get further than about one-eighth mile from the roads. This seemed to have the initial effect of driving them from the area.

The quarry by Cadomin, a mining operation, has quite a number of bighorn sheep around it. They do not seem to be disturbed to any great extent by that development.

MR. KINISKY:

Some major migration routes from summer to winter areas for these animals happen to coincide with some major corridors along the river basins. These animals have been away from people for some time and now have to pass through an area. How much restriction is there on the migratory habits when there is development along these corridors?

MR. STELFOX:

It depends on the species. In Alaska caribou herds have, to a large extent, ceased to move across heavily travelled highways. I don't know of any studies that have shown that the moose, elk and deer



of the east slopes have failed to move across the roads to a lesser extent than they did before the roads went in.

MR. KINISKY:

An area of forestland which has unmerchantable two, three, maybe four inch material in it is presumably sterile as far as wildlife is concerned. One party says if a sterile forest burns, it'll probably improve the land; the other group says, no, we're going to fight fires no matter what happens. What is the true story on this situation?

DR. SILVER:

The Alberta Forest Service decides whether to fight a fire or let it go.

MR. KINISKY:

In a biological sense which is the best thing to do?

DR. SILVER:

If you burn a sterile forest, yes, you will get regeneration. But if it is a pine forest, the chances are it will come up just as thick again.

MR. KINISKY:

What would happen in the intervening time?

DR. SILVER:

It would depend on the site and everything, but you do get different vegetation, and in some cases you create a wildlife habitat for a short period.

MR. KINISKY:

In your opinion, how long does it take to do an environmental impact study, producing statistically valid information, of a particular area?

DR. SILVER:

I am familiar with the survey which our department participated in, the Mackenzie pipeline survey. That is a three year program and it is barely adequate. Here we're looking at a large area which is not as well known. I'd say anywhere from one to three years.

MR. KINISKY:

Have you or any of your group had an opportunity to look at some of the reclamation of surface mining areas in the eastern slopes, especially at elevations of 5,000 feet and higher?

DR. SILVER:

I haven't.

MR. DOWLING:

Page 19 of your brief refers to areas of insufficient or inadequate information. What is Environment Canada or other federal

government departments doing at this time to help fill the gaps you have listed?

DR. SILVER:

We have merely pointed out where we feel these gaps exist. As a rule we do not do research for ourselves. The work we do is at the request of land managers which, of course, include the provincial government. If there was a need and the province was interested, I imagine a cooperative arrangement could be worked out and some of these gaps worked on.

Speaking for the Canadian Forestry Service, we work at the request of the timber companies, the Alberta Forest Service, the managers of the land. We do research to provide them with the information they need. The federal government and our department operates in this way.

MR. DOWLING:

Your brief states that there are too few climatological, hydrometric and water quality monitoring stations. Should we wish to have additional information on this particular area, would we ask the federal government, or is it something we would be carrying out on our own?

DR. SILVER:

Depending on the situation, that is something you might carry out on your own. We have a hydrology program, we are cooperating with the Watershed Board and have for a number of years. We have ten man years directly involved in this watershed research program. That is approximately the extent of what we have available.

MR. DOWLING:

What is the state of cooperation between the provincial and federal governments with respect to these activities which dovetail? Have we got proper communications, have we got overlapping?

DR. SILVER:

I note quite a change for the better lately. I think we are getting closer together all the time. I don't feel there is that much overlap.

DR. TROST:

Would you describe the structure of Environment Canada which looks after regional needs?

DR. SILVER:

The federal Department of the Environment was created quite recently. A number of services which existed in other departments were formed into a new department. The Canadian Forestry Service has a research laboratory in Edmonton, it is responsible for research within Alberta, Manitoba, Saskatchewan and the Northwest Territories. Canadian Wildlife Service also has their western region headquarters in Edmonton; the western region includes the area west of Manitoba. Inland Waters Directorate has a lab in Winnipeg. Fisheries and marine services have an office here in Edmonton. I don't know if they have offices elsewhere in this region. Two of the fisheries people are at our lab. The Fisheries Research Board and the Environmental

Protection Service are also headquartered here in Edmonton. The Atmospheric Environmental Service is here and has stations elsewhere. It includes the old Meteorological Branch; it collects weather data from a variety of stations, airports and things like this. Those are the services of the department within this region.

DR. TROST:

That includes the seven contributors listed in your brief?

DR. SILVER:

That's right.

DR. TROST:

Do these branches report to a regional office in the west, or do they report individually to Ottawa?

DR. SILVER:

Most of us have headquarters staff in Ottawa, but coordination within the region is carried out mostly by a Regional Directors Board. We meet every two months, either in Edmonton, Calgary, Regina or Winnipeg. We discuss problems, programs, cross-machine programs and things like this brief. We coordinate our efforts this way.

DR. TROST:

Then you have a group of agencies in the major cities in the West?

DR. SILVER:

Most are in Winnipeg, Regina and Edmonton.

DR. TROST:

These are staffed by professional scientists and other people as needed by the civil services?

DR. SILVER:

Right.

DR. TROST:

Do you feel that adequate use is made of the services and information that these people gather? Does it get to the public and into use in the way you feel it should?

DR. SILVER:

Well, we do everything possible to get this information to our so-called clients. There are times when we feel our clients don't make as much use of us as they should or could.

DR. TROST:

Do you feel there is a need for liaison between your service, the universities, industry and the provincial government in gathering information and doing research?

DR. SILVER:

The Canadian Forestry Service has such a regional advisory committee which is designed to advise on the research program within this region. It includes representatives from the province, industry and the universities.

DR. TROST:

The Science Council recently stated that in forestry and in agriculture there was little receptiveness to external inputs. Do you feel they were a little off-base with that comment?

DR. SILVER:

I've been here ten months and I think I've established fairly good working relations. I had not realized that we were not responsive. To a certain extent this could be. People always get accused of not working on the things other people think they should be working on. Of course, you'll go and talk to someone else and they will say the opposite. With our limited resources we can't research all the items requested. We have to set priorities, and of course people tend to disagree. There are some things you just can't work on.

DR. TROST:

Do you feel there could be a freer movement of ideas and information between the department, industries, universities and the provincial government?

DR. SILVER:

I think it operates quite well. These things can always stand improvement. I think we have excellent working relations.

DR. TROST:

We've always felt that the work done by the Foothills Resource Allocation Task Force, which is a provincial-federal venture, was an excellent example of most fruitful cooperation.

DR. SILVER:

That's an example of a cooperative program which is working well. It is now producing information which is needed. The need didn't exist in 1963 when we got into it, but by sheer luck it is needed now.

DR. TROST:

You suggest that there are alternatives to clearcutting and to current logging practice in forest management. Will you elaborate on that?

DR. SILVER:

There are always alternatives to clearcutting. You can cut selectively. It depends on whether you are looking at a commercial wood fibre production or trying to manage the forest for different purposes. In most cases, particularly if you are using equipment for logging, you are into a clearcut, which can be anything from 1 acre up to 500 acres, because that's the only way you can move your equipment through the woods. The alternatives are selective and depend on your objectives. By selective cutting I don't mean high-grading the stand

because then you end up with a bush that is not much use for anything or to anyone.

COMMITTEE FOR AN INDEPENDENT CANADA

Edmonton Chapter  
Box 1511 Edmonton



COMITÉ POUR L'INDÉPENDANCE DU CANADA

904-1

Brief Submitted to  
The Environment Conservation Authority,  
Province of Alberta.

Public Hearings on Commercial  
Proposals for Tourism and Recreation  
in the Eastern Slopes.

by

J. C. Russell, Chairman, Edmonton Chapter.

July 5, 1973.



## INTRODUCTION

The Environment Conservation Authority and the Government of the Province are to be commended for holding these public hearings on future use of the Eastern Slopes. In large measure this Western section of the Province is undeveloped and not firmly committed to any particular use. This unusual state of affairs allows the people of Alberta through their Government and its agencies an opportunity to use the area wisely and for their long term benefit. Other highly knowledgeable individuals and groups will be presenting arguments to these hearings on environmental and planning considerations. The Committee for an Independent Canada would like to address a fundamental aspect of development in the Eastern Slopes: who is to own and control any commercial and recreational facilities; and in whose interests are they to be? This brief will be confined to identifying the public interest in these regards, and suggesting policies to ensure that interest.

Statement of Principles

One of the dominant aspects of the latter third of this century, and already uncomfortably with us, is the pressure of the human population on the finite resources available. In the past months, basic commodities such as petroleum and food stuffs have risen in price in response to reputed "world market forces". Desirable undeveloped land such as the Eastern Slopes of Alberta will under the existing and developing forces become a great magnet. The people of this Province own title to an incalculably valuable property, but unless they regard it as such, it may easily slip from their control.

The Committee suggests that any future commercial or recreational projects in this area be controlled (not just 51% owned) by Canadians or Canadian corporations, and predicated on a Canadian market. This principle

should apply to such apparently diverse operations as cattle grazing, ski resorts, and coal mining. Only in such a manner can it be ensured that the development and resulting economic effects will bring maximum benefits to Canadians.

It is of particular concern to the Committee that in developing the perpetual resource of the Eastern Slopes we avoid the present situation in the oil industry. In this case a presumed global shortage, yet to actually occur, is being used to raise the prices Albertans and all Canadians pay for petroleum products. Canada is in balance self sufficient in oil, and need not be a party to the world oil economy. By allowing the Canadian oil economy to be completely dominated by foreign corporations we will pay higher costs. These will be of benefit only to the foreign oil companies further increasing their large profits. Do we wish to repeat this situation with respect to coal, forest products, and recreational facilities such as ski areas?

#### Specific Recommendations

- (1) Only development that shows a strong balance of benefits to the people of Alberta be allowed. The analysis of benefits should include all direct and indirect costs to the people of Alberta.
- (2) All companies or individuals approved for development be required to be Canadian or Canadian controlled.
- (3) Approval of recreational facilities be dependent upon demonstration that they are intended to serve a domestic and not an international market.
- (4) That no new mining or other mineral extraction projects be approved that are based on direct export of the raw product.
- (5) All projects be on a lease hold basis only of not more than 20 years.

Renewal should be subject to review of the public interest. A full scale assessment of the net benefit of the tourist industry to the Province should be undertaken.

(6) New projects, especially new resort complexes, be approved only slowly, and that sufficient time be allowed to assess the effects of one or two before others are started.

#### General Comments

The Committee feels that any acceptable development must be in the economic interest of Canadians and Albertans in particular. The powerful ability of foreign (especially multinational enterprise) owners to transfer profits and tax revenue to foreign jurisdictions has been well documented. The Wahn and Watkins reports as well as especially the Grey Report have made this clear. Development in the Eastern Slopes will impose costs on Albertans in the form of public services, and losses in the form of lost future opportunities. Thus they must receive benefits in return that well outweigh these. Recommendation 2 is essential if this is to be so.

Recommendation 3 is designed to prevent Alberta's Foothills area being used as a world recreation area to the detriment of Albertans. Already there is significant pressure from Japanese and American skiers in Western Canada. Should air access at Hinton and Canmore be improved Albertans could easily be priced and crowded out of their own Province's ski areas. We would suggest that a balance of market is appropriate and necessary. In fact limited numbers of foreign users of resorts might make some projects viable that would otherwise be uneconomic. The Province has already established the principle that the interests of residents comes first in the Game Laws respecting nonresident hunters. We urge that the principle be applied generally.

The proposal "Mount Cline Leisure Resort" described in the Authorities' documentation is disturbing. We have been unable to find this proposal in the source material in the information centres. The estimated cost of \$110 million suggests a very large complex based on a foreign market. The next step would no doubt be to request an 8000 foot runway on the Kootenay Plains to allow large jet aircraft to bring clients in directly. The Cline river crossing area is very attractive, being adjacent to the new Lake Abraham. It is also very vulnerable being between two Wilderness areas and the National Parks. We seriously question whether Mount Cline Leisure Resort could have any net benefit for Alberta. We also feel that the financial control of the proposers should be made public. The Authority should be highly critical of this proposal and we urge its withdrawal.

The Government of Alberta is attempting to create a more viable industrial base in the Province. Towards this end we urge that no further raw natural resource exports occur. It is our opinion that detailed economic analysis would show low or zero net benefits from such projects. One good, if controversial example is the Grande Cache coal mining operation. If the costs of the Alberta Resources Railway were properly allocated to this operation, the true costs would begin to be evident. Where was the benefit? The number of miners is small, and they were brought into the Province. The royalty was 10¢/ton.

Because the future value of the Eastern Slopes is very difficult to assess land should not be sold to developers. A lease hold system with short tenure would safeguard the long term interests of Albertans. Most commercial operations should have fully recovered their investment by 20 years and therefore this is not an unreasonably short time. Leases for longer periods, such as the 45 year National Parks leases, lead to long term difficulties as they begin to resemble deeds.

Finally we urge the Authority to move slowly and acquire information on the effects, costs and benefits of resort developments. It has become essential that a full scale study of the economic net benefits of the tourist industry be made. The Government may prefer a different agency than the Authority to make the study. The advice that we have received from highly qualified economists is that no such study is available. Because of the strong pressures for tourist development and the activities of the Government's own Department of Tourism, such a study is essential.

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

You mentioned in your brief that Canadian control of industrial development is of paramount importance. It has been said to us in the past that when you get to be a big developer it doesn't really matter who you are, you are just a bad character. Do you really feel that a Canadian developer would make better choices as far as Canada is concerned than a multi-national corporation?

MR. RUSSELL:

Yes, I think it would on balance. A common argument is that it doesn't matter. I think it does. For one thing, the multi-national corporation is like the hydra. It's very hard to control. I think you have a better chance of controlling a local developer, even if he is very powerful. One aspect which seems to be generally overlooked, except if you read any of the economic reports on foreign ownership such as the Gray Report or the Wahn Report, is that the multi-national corporations or foreign corporations operating in a second country regularly, through their transfer pricing and management fees, succeed in transferring a lot of their profits out of the host country and show that profit at their home office. This is desirable both from the company's and the country of ownership's point of view, because then the corporation taxes are levied there and not in Canada. This can make a very large difference.

MR. KINISKY:

When we look at some of the industrial development that takes place in the eastern slopes, we're talking about foreign-owned corporations working our resources to satisfy a foreign market. Can you see any way whereby this activity could continue and still provide sufficient benefit to Albertans and Canadians so as to be acceptable practice?

MR. RUSSELL:

I have very strong reservations. If you are talking about such things as the export of raw coal by foreign-owned corporations, which is what is happening now, with all the associated environmental problems, I really find it hard to see where you are going to benefit Canada. If the operation was Canadian-owned so the profits were kept here, and it was satisfying a largely Canadian market, then I think it would very clearly be in the Canadian interest. I think it's very clearly not in the Canadian interest to have Ontario buying U.S. coal and therefore under the gun of Washington. If fuel is in short supply in the States, then if they want to turn the screws on Canada a little, it's very easy to say we'll stop half your coal. It's a situation of extreme vulnerability. Yet, we are shipping our own coal out of the country. It doesn't seem to make sense.

MR. KINISKY:

Do you know how this business of transferring funds out of Canada to some other place so there is an escape on paying taxes is generally done?

MR. RUSSELL:

There are a variety of devices. The Gray Report has a table showing how a manufacturer based in the United States with an assembly



operation in Canada exchanges parts and finished goods as well as buying a lot of parts from foreign suppliers or from its own parent. By a 5 per cent change in intracompany pricing policy, which is trivial and virtually impossible to detect, you can halve your profit in one country. It's that simple.

It's certainly a matter of policy of various countries that this should be done. About two years ago, Mr. John Connally when he was Secretary of the Treasury in Washington publicly told the large U.S. corporations that they weren't bringing enough money home this way. He told them to bring more money home in transfer payments and management fees. This is another one of these devices. You say, well we give you such good management advice; you pay us for it. It's a business expense and it doesn't appear other than as an expense on the books of the company operating in Canada. All the indications are that the companies such as GM, Ford and Imperial Oil, in fact, did what they were told. I don't have the figures but I gather you don't argue with a guy like Connally if you are an American.

MR. KINISKY:

We are told pretty regularly about the necessity for us to survive as far as the international monetary community is concerned. Because of this we are always warned about deficits in our balance of payments. I'm also told that the big way to take care of the balance of payments is to wind up with a lot of exports. What happens if we stop exporting and switch the other way? Is this going to threaten our survival in the world monetary community or is it necessary for us to survive in that community?

MR. RUSSELL:

If you talk to people like Eric Kierans, they will tell you that the Canadian dollar is grossly overvalued anyway, in part due to foreign investment in such projects as natural resource development. Another one of the problems associated with such projects is that we import relatively small amounts of capital. The developers go to Canadian banks, borrow 80 and 90 per cent of their capital from our savings through our chartered banks, make considerable profits on their very small investment and then export them. This country has a very large balance of payments deficit but it is largely interest and dividends going to foreign capital.

To give an example of how dramatic this can be, Mr. George Schultz, who more recently has been Secretary of the Treasury in Washington, wrote a report on the question of the balance of benefits to the United States from the point of view of the American government of foreign investment by Americans in other countries. It is quite authoritative. In it he points out that American investment in the oil industry in Canada, which essentially means Alberta, was so set up that within the first year they recovered 70 per cent of their investment. That's pretty good leverage. This has been widely published elsewhere. I haven't seen it published in The Edmonton Journal, but it was certainly published widely in papers in the United States and England.

MR. KINISKY:

In essence, you are saying Canadian chartered banks are financing the sale of our resources to foreigners. It is not foreign investment at all but the use of our own money to buy us out.

MR. RUSSELL:

That's right. Have you seen the Royal Bank of Canada ad that was placed in foreign newspapers saying, "We deliver Canada"? It was in English and European newspapers and even in the New Yorker a little while ago.

MR. KINISKY:

You talk about the necessity for carrying out cost benefit studies on the tourist industry. We have had some Albertans tell us that they are just a little fed up with tourist promotions and they don't want tourists. They'd like to have some of the country for themselves. People who are interested in the tourist industry tell us about fantastic multipliers, millions of dollars and how it's going to be the second biggest money-earner. Where does the CIC stand on this particular argument?

MR. RUSSELL:

The question is not clearly resolved. Nobody seems to have the information required to decide whether it is a good deal or not. I think there are a lot of hidden costs which are not normally assessed against the benefits.

One which was forcefully brought home to me last Sunday as I drove back to Edmonton from Vancouver was that the highways in the mountains, particularly through the Fraser Canyon to Kamloops, are clearly inadequate. They are grossly overloaded. Two-thirds of those cars and heavy vehicles are American registered, I would guess. Those people are coming here, possibly persuaded to do so in part by advertising by Canadian tourist bureaus, and creating a demand which will force the Canadian taxpayers to pay for substantial improvements to those roads. I gather there is already discussion of twinning the Trans-Canada through the mountain parks. This is a very large sum of money and I'd like to be assured before this thing goes ahead that there is something in it for us somewhere. I don't know if there is, but I'm suspicious that there may not be. It's like the shell game, where is the pea?



907-1

A SUBMISSION

BY

THE ST. ALBERT AND DISTRICT

FISH AND GAME ASSOCIATION

TO THE

ENVIRONMENT CONSERVATION AUTHORITY

PRESENTED AT THE HEARING INTO

LAND USE AND RESOURCE DEVELOPMENT

IN THE EASTERN SLOPES

Presented By: F. Miller

The prime resource of the East Slope area is water.

The watershed for the entire prairie area is contained in the mountains and foothills of Alberta. This fact must be kept in the forefront when considering any development or use of the East Slopes.

As well as supplying the life blood of the three Prairie Provinces, the water courses of the East Slopes provide many streams and rivers that supply sport fishing of from fair to excellent in quality.

Water courses are very easy to pollute, divert or otherwise destroy but are much more difficult to repair or restore. In many cases, restoration is impossible.

One of the major forms of pollution of streams and rivers is siltation, caused usually by erosion of the banks. The greatest single contributor to this problem being roads and cut line type corridors. These roads are usually constructed for oil and gas or coal exploration or extraction or timber harvesting. Two bad examples of this are the Alberta Resources Railroad and the Forrestry Trunk Road from Grand Cache to Grande Prairie. There are numerous examples of improperly constructed culverts which make it very difficult or impossible for fish to pass. There are also many cases of shoulders that were poorly revegetated if at all, resulting in a great deal of soil erosion.

Water pollution due to soil erosion can also be caused by poor forest harvesting methods. Cutting too close to stream banks and clearing too completely on sloping areas promotes erosion. There have been instances of this in North West Pulp and Power's operations in the Athabasca Basin.

Strip mine operations are another major contributor to water pollution. As well as the major road network resulting from a mine

operation there is the much more concentrated pollution from the processing operation at the mine site. Coal dust from plant operations and sedimentation ponds is carried many miles when it is allowed to reach a stream or river. The water used to cool the thermal plants used for drying the mined coal also causes thermal pollution in the receiving water body.

Cardinal River Coal Company has on two occasions been charged with and convicted of polluting.

The second most important resource of the East Slope area is the fish and wildlife populations.

The wildlife of this region provides many hours of enjoyment to hunters, camera buffs and people who enjoy observing nature. This is the type of resource that is very difficult to put a price tag on. It is, however, the type of resource that must be protected and preserved.

In some cases, such as Mountain goat and Bighorn Sheep, the animals are found nowhere else in the Province and few places in the world. Their ranges are very limited in comparison to the total area but very critical. These lands must be protected from destruction if we are to preserve these beautiful animals for future generations of man to enjoy.

The winter range is particularly critical because of the unborne animals dependence on their mothers having an adequate food supply. If this food supply is not available to the mothers, the chances of the young animals survival are greatly reduced.

The fish population in Alberta is also largely dependent on the East Slope area. This is another reason that water quality in

this region must be maintained at a high level.

Some forms of pollution may not be harmful to adult fish and anything that reduces the level of oxygen in the water can be disastrous to eggs or juvenile fish.

The industry found in our mountains and foothills, mining, oil and gas exploration and timber harvesting, is incompatible with maintaining the area in a state that will support fish and wildlife populations and provide relaxation and enjoyment for man.

Surface mining of coal causes wide spread and often irreparable damage. Streams are rendered useless as fish habitat. Prime and critical ranges are destroyed and wide spread areas are made undesirable for any other use by man due to the dust noise and general unpleasantness of the area.

The actual mine site itself disrupts a relatively small area. The largest area that is disrupted by mining is damaged by roads, processing sites and other services and overburden dumping areas.

The most widespread damage is caused by the network of roads that strip mining spawns. These roads are built with very little thought to any thing but making as straight a line as possible between two points. The great amount of noise and dust created by the huge vehicles which use these roads devoids the area of wildlife such as sheep, bear, elk, moose, or any other large animals usually found in the vicinity.

As stated earlier, these roads also either destroy or seriously damage any fish habitat when it is necessary to cross or parallel a stream.

We feel that the overall impact to a mine area would be greatly reduced with proper reclamation regulations and enforcement of these regulations.

In certain areas of the east slopes where ungulate range is superior and critical to big game populations and in areas where reclamation projects do not appear feasible, no exploitation of non-renewable resources should be allowed.

One of our Club's objections to the presence of the mining industry in the mountains and foothills is the lack of financial gain to the people of Alberta. The largest percentage of the mining companies in Alberta are owned by non-Albertans. This means that the profits leave Alberta. The coal mined from our mountains goes almost exclusively to Japan. That leaves only a relatively small number of jobs for Albertans. It would seem that with the small number of jobs involved, an equal number could be provided very easily in some other industry. Many, no doubt, in the recreation or tourist industry.

It should be noted that many economists and financial experts are quick to agree on the high economic gain to an area from tourism. The service industries are generally the most labour intensive of any endeavour and provide greater economic benefit to the people of an area. It is an industry without smokestacks although not one without problems. It is our Club's belief however that the attendant ecological problems of tourist development are easier to deal with and that the people in this industry seem to be taking a more positive approach in environmental protection than the coal industry.

It seems that since both coal and profits leave the country, we are raping our mountains for the Japanese who get the coal and other non-Canadians who get the profits.



Appendix A is taken from a study done by F. F. Slaney and Co. of Vancouver on the Environmental Impact of Surface Coal Mining in Alberta.

One must doubt the sincerity and ethics of some mining companies in their methods of operation. For example, McIntyre Porcupine Mines Ltd. found it necessary to dismiss approximately 150 employees from their subsurface operations at Grand Cache last winter. Then, almost within days, the same company had applied for a permit to expand their operations at Sheep Creek.

The most serious erosion and sedimentation problems in forested areas originate from logging operations and forest roads. (1)\*.

Very little research into methods of minimizing watershed damage has been conducted in Alberta (1)\*

Water erosion is the primary agent of watershed damage in logging and road construction. (2)\*

Numerous studies indicate that forest cover is one of the most effective vegetation types in maintaining and protecting soil from erosion. (3)\*

It has been estimated that about 10% of the Rocky Mountain Forest Reserve cover had been removed in the development of exploration and seismic lines by the energy industries. (4)\*

Reforestation should restore the areas that have been harvested. However, in the Athabasca basin where most of the area is leased to Northwest Pulp and Power of Hinton, regrowth seems to be very slow. If regrowth can be promoted rapidly enough, disruption can be kept to a minimum. We feel that any company which harvests timber should be required to place the greatest possible emphasis on reforestation to keep the area disturbed to a minimum.

\* see bibliography

Northwest Pulp and Power has been guilty of cutting too close to stream banks and thus allowing siltation and also complete clearing of areas allowing soil erosion. This sort of practice must be stopped.

#### Oil and Gas resource exploitation:

The adverse effects of oil and gas resource exploitation is primarily pipeline construction, seismic lines, disposition of process water from gas plants, oil or gas leaks, and salt water spills.

The precipitation of solids from sulphur extraction gas plants, such as sulphur dust and sulphur particulates, could have an effect directly on water quality, and indirectly on watersheds by affecting vegetation cover sensitive to air pollutants, such as sulphur dioxide, hydrogen sulphide and other sulphur gases.

The Canadian Forestry Service is to add to their staff, nationally, some eighty surveillance personnel, as their share in the national effort toward pollution control on forested lands.

The situation is not that encouraging, if one considers the gas transmission from well site to the plant, including the preliminary exploration stages. It has been estimated that about 10% of the Rocky Mountain Forestry Reserve cover has been removed in the development of exploration and seismic lines by the energy industries. The acreages involved per year are said to be approximately equal to the number of acres lumbered commercially per year up to and including 1970. (4)\*

#### Hydro Electric resource development:

The effects of hydro development usually work to advantage in watershed management. However, hydro resource exploitation may be in conflict with the other needs served by water resource development.

When water is in short supply, there is a conflict between irrigation and hydro power regardless of which is upstream and which is downstream. (6)\*

Thermal generating plants have a multiple effect on the quality of water:

- A Coal mining, with all its adverse effects on the environment, is a direct result of thermal generation of hydro power.
- B Thermal pollution of lakes and rivers is an undesirable side effect.
- C Air pollution is also an undesirable effect.

Nuclear generation of hydro eliminates the need for coal mining and also eliminates air pollution, however, thermal pollution is greater.

The construction of reservoirs for hydro generating plants means the destruction of wildlife habitats along the river valley.

For migratory birds, a stable or slightly dropping water level is required from early spring through to late summer so that nests are not flooded out. This regime is particularly important in the shallow parts of the reservoirs to provide the growth of certain flora which form a necessary part of the food supply for waterfowl.

On the other hand, almost all other uses of water would be better served by rising reservoir levels throughout June and July in order to impound as much as possible of the surplus floods for later use. (7)\*

Water diversion is another aspect of hydro development.

"Since the ratio of summer to winter flow on most of the rivers in Alberta is about six to one, hydro electric plants located on such

streams must have generating and storage facilities.....these facilities could be used.....to generate cheap power to pump water to lands on other basins which could not otherwise be irrigated." (8)\*

In most river valleys, with flows as they are right now, human activities and the environment are in balance. If diversions cannot be operated so there will be little effect on the activities and environment in donor basins, conflicts will arise between receiving and donor basins. (7)\*

## SUMMARY

We cannot overemphasize the protection of the East Slope water resources. They are the lifeblood of the prairies. This resource is easily destroyed and nearly impossible to repair. The impact on all other renewable resources that would result from damage to the watershed would be so far reaching that it is difficult to describe. Road construction and maintenance and mining have caused the greatest destruction of this, our most valuable resource.

Fishery and wildlife populations are the second most important resources in the East Slope and is most directly affected by water quality and by available range. The habitat and water must be guarded to perpetuate wildlife for our great-grandchildren to enjoy. We have a responsibility for jealously guarding their environment and protecting it from unnecessary degradation from poorly planned resource exploitation.

Strip mining is, along with roads, the major destroyer of the environment of the East Slopes. It has provided limited economic benefit to the people of Alberta, particularly in view of the massive damage. The coal companies must stop raping the land until they can prove positively that they can reclaim the land satisfactorily.

The forest industry must also be forced into more positive methods of environmental protection. Severe damage has resulted in the past from overlumbering and cutting to close to water courses. If the companies are not going to voluntarily provide positive plans for environmental protection, the government should take steps to force the companies to take the necessary action and protect the East Slope resources for the people of Alberta.

We recognize that the renewable and non-renewable resources of the East Slopes will be extracted where commercially feasible. We do not accept however, that companies given the privilege of extracting these resources should be allowed to do so where they are being irresponsible in protecting other resources of less direct commercial benefit. If these companies or individuals are not prepared to accept the responsibility for environmental conservation as a price for obtaining these privileges, the privilege should be withheld. In other words lets not allow unlimited granting of licences to cut timber, explore for oil, strip mine, graze or construct roads until the parties involved can provide the government and the people with well laid plans for reclamation and protection.

We are consuming larger amounts of energy every year. The growing demand for energy combined with the growing outcry against pollution are factors which could favor hydro power development. Hydro power should not be identified with provincial boundaries nor with vested economic interests. It is a conflict within society and can only be resolved through the classification of development objectives. At this time there is not enough background information to predict the consequences of adopting one objective or another.


## RECOMMENDATIONS


- 1 A review board should be established to consider all proposed developments in the East Slope area. It should be a non-political body consisting of members from all parts of the province, and all occupational groups. The review board must be guaranteed right of access by the Provincial Government to any information it would require in its work. The establishment of such a body would ensure a standard land use policy for East Slope areas.
- 2 A land freeze should be enforced throughout the East Slope area until the Provincial Government establishes a land use policy for the area. This would include an immediate stop to granting of any leases for any purpose.
- 3 Roadways should be limited to those presently in use. Any future developments should utilize existing roads.
- 4 Single utility corridors should be carefully planned to handle all necessary transmission facilities and roadways needed in an area now and in the future. These corridors should be planned so as to provide maximum utility with minimum ecological damage.
- 5 If grazing is allowed in forest reserves, the government must take whatever steps are necessary to ensure that the water in all rivers, streams and lakes remains pure and the banks are protected. If water purity and bank protection cannot be ensured, no grazing lease should be granted. Grazing provides very little profit to the government,



and in many instances only slightly more to the ranches, and it can be extremely detrimental to the fish and wildlife of the region.

- 6 The Government should attempt to regain ownership of as much of the privately owned land as possible in the East Slope area. This could be done by purchasing land from private owners, as it is put up for sale. All land presently owned by the Crown should be retained. The result should be better management of the resources of the East Slopes.

  
W. J. M. ANDERSON CA  
PRESIDENT.

  
F. C. MILLER  
CHAIRMAN, POLICY COMMITTEE

BIBLIOGRAPHY

- (1) Forest Research Laboratory, Edmonton, Alberta.  
Information report A-X-42, page 1.
- (2) As above, page 3
- (3) As above, page 5
- (4) Environmental Effects of the Operation of Sulphur Extraction Gas  
Plants by Dr. D. F. Klemm, page 99
- (5) Information report A-X-42, page 48
- (6) Water supply for the Saskatchewan-Nelson Basin (a summary report  
1972), page 17
- (7) As above, page 18
- (8) Report on Surface Water Supplies and Water Power of Alberta, Their  
present and ultimate uses, page 50.

907-15  
APPENDIX A  
PART 5

IMPACT APPRAISAL

5.1 A NEED FOR APPRAISAL

A problem with surface mining is that the costs it imposes on others do not appear in the internal accounts of the mining company. Thus, a rational decision about the profitability of mining a particular deposit may lead to a socially undesirable result and a net loss to Alberta.

Protection of public welfare may require intervention in the market process to ensure that external costs are considered. The goal of such intervention should be the maximization of net social benefits.

5.2 BROAD COMPARISON OF BENEFITS AND COSTS

It is useful to make a distinction between values which normally occur within an accounting framework, direct benefits and costs, and those which do not, indirect benefits and costs.

5.2.1 Direct Benefits and Costs

Direct benefits to Alberta are payments to the factors of production - land, labour and capital. Royalties are paid to landowners, including the Crown, wages to labour and profits to capital. Taxes are included in the gross returns to labour and capital and cannot be considered as additional benefits.

These payments must be made to Alberta's factors of production to be counted as benefits. If out-of-province labour is employed and sends money out of Alberta, then payments to that labour do not benefit Alberta. To the extent that profits are sent out of Alberta, payments to non-resident capital

do not constitute benefits to Alberta. However, any taxes collected before these monies leave the province can be considered as benefits.

Land labour and capital are scarce resources and thus their use in any given activity forecloses their use in any other activity. When these resources are being put to their highest use in the economy, they are earning their highest possible returns or incomes. The second highest or next-best earnings for resources are known as their "opportunity-costs". Thus the direct costs of using land, labour and capital for coal mining are the opportunity costs, or earnings they could command in an alternative use.

The direct cost of using land for the removal of coal is its opportunity cost, namely the amount that would be returned to it if it were used for grazing, cereal production, forestry, etc. Another direct cost is the depreciation in land value during and subsequent to the mining operation.

In a healthy or normally productive economy, wages paid to labour and profits earned by capital will generally be equal to their opportunity costs: that is, these resources will earn little more from their use in surface coal mining than they would in any other business activity in Alberta. In general, unless the mining company proposes to use workers who would otherwise be unemployed, direct costs of labour and capital will be equal to the payments made to them. The fact that there is a certain level of unemployment at any given time does not mean that the creation of new jobs in surface coal mining is a direct benefit. We must be sure that the surface mine employs people from Alberta who actually would otherwise be unemployed and does not simply attract workers from other areas.

The creation of jobs in surface coal mining may be considered a direct benefit to Alberta under certain circumstances. This would be the case if:

- a) The government endorses and pursues a policy of economic growth and wishes to increase the population and labour force in Alberta,
- b) The government wishes to encourage and promote economic growth in certain regions of the province and this can be done through surface coal mining development,
- c) The government wishes to broaden and diversify the economic base of the province so that the economy is less sensitive to changes in any one section. However, coal mining already exists as an underground operation.

We cannot judge in advance the extent to which the government of Alberta may be committed to such goals. To the extent that they are, however, they should still be satisfied that using resources of labour and capital in coal mining will meet these goals more adequately than using the same resources for any other activity.

Similarly, the basic surface mining activity may stimulate spending in other sectors of the Alberta economy, in a "multiplier" or secondary effect. This activity should not be counted as a direct benefit per se, however, for if the resources used in surface coal mining had been used in other productive activity in Alberta, secondary activity would probably be just as great. Thus, the creation of secondary economic activity should not be measured as a benefit that would only come from coal surface mining -- such activity would probably follow from the use of labour and capital if alternative uses exist in Alberta.

If wages paid to labour and the profits earned by capital in surface coal mining are higher than could be earned in any other form of activity, the factors are said to earn economic rent, the difference between the actual return to the factor and its opportunity cost. Generally, the only factor to earn economic rent will be land. Rent accruing to landowners, including the Crown, can be calculated by subtracting the opportunity cost of the land and depreciation in land value from royalties received from surface mining operations.

#### 5.2.2 Indirect Benefits and Costs

The only indirect benefit of importance is the provision of access to areas which were previously inaccessible. If a mine operates in an area already serviced with roads, or if mine roads do not make a significant contribution to access, then the indirect benefits do not occur. Improved access, moreover, does not always constitute a benefit.

Indirect costs result from all the side effects of surface mining operations described in Part 4.

### 5.3 APPRAISAL MECHANISMS

Although we can make broad comparisons between the benefits of surface coal mining in Alberta and the projected environmental consequences, we need a mechanism to judge the social desirability of any particular surface mine and to indicate the extent to which side effects should be mitigated.

APPENDIX B

COMMERCIAL DEVELOPMENTS IN THE EAST SLOPE;  
SPECIFICALLY THE NORTH SASKATCHEWAN AND  
ATHABASCA RIVER BASIN BIOLOGICAL ZONES

---

Without going into specific details on each proposed development (which should be done by the Board at the time development licenses are being requested), we would offer the following comments.

Most of the developments appear to be well planned on the surface and the developers seem to have given the ecological problems much consideration. One must hold judgement on these merits until they have passed a careful review by a properly appointed development Board.

The area which would appear to require the most attention in this brief is whether or not the socio-economic benefits of the many developments warrant their construction. Particularly, the proposals for convention facilities and ski developments in some of the more isolated areas (Cline River Basin). The idea of building convention and educational facilities in these areas does not in our opinion provide maximum socio-economic benefit in the East Slope and in relationship to the entire Province. This is particularly evidenced when one considers the present under-utilization of some of the hotels and convention facilities in our major cities, especially when the number of new major hotels under construction is taken into consideration. Also, the present under-utilization of our universities and colleges with the huge amounts of capital invested in these facilities, we believe further enforces the argument against these developments. We do not consider the desire for isolation by companies presenting training courses to be a valid argument for proceeding with developments of the scale proposed for the Cline River area. A further consideration is the existence of the wilderness areas which would be on the doorstep of these major developments, putting increased pressure on these areas.

In regard to the proposed new ski area developments, one must question whether they are maximizing the socio-economic return on the capital and labour invested - especially when consideration is given to the fact that two ski areas in the Province have closed in the past five years, three more are operating on a financially borderline basis at present, and some have changed hands several times. It would seem to be a better investment for the people of Alberta to upgrade or re-open existing areas where the ecological damage has already been done and where careful planning should result in little more destruction to the alpine ecology.



In closing, we would like to note that one of the most serious drawbacks to these developments is the seemingly needless construction of highways. The demand to permit construction of accommodation where people can enjoy the scenery lead to construction of highways, encouraging people to travel at speeds making it impossible to comprehend and appreciate the very scenery they have come to see. These same highways are the biggest contributor to pollution of the water resources. Therefore, any developments in the East Slope area must be carefully considered on a cost/benefit basis to the people of Alberta.

## QUESTIONING BY THE AUTHORITY

MR. DOWLING:

Various people, especially wildlife biologists but also the coal mining people, say that if you want to find coal, you just have to look where the key range for large game is. There has been a suggestion put forward that perhaps one of the development costs a coal mining company might carry would be the exchange of a key range for a range which was artificially prepared so that the game would have another place to go. The only thing I have found in considering matters of this sort in the past is that the game don't know about your plan and fail to understand it. What in your opinion is the likelihood of success?

MR. MILLER:

As you just said, the game don't always know about your plans and don't always cooperate. If it worked it would be fine, but I'm not too sure it would. I'm not sure the game would move where they are supposed to.

MR. DOWLING:

Is there any way we could determine whether game could be brought to change their habitat?

MR. MILLER:

I would think a pilot study would be one way of doing it. That's about the only way I know of.

DR. TROST:

You suggested a review board to consider all developments on the eastern slopes. What powers do you think the review board should have?

MR. MILLER:

We feel it should have the power to grant or not grant a licence or permit to developers, either resource or recreational, if it felt there would be no benefit to the area or the people involved. It would have binding power.

DR. TROST:

It would have final power regardless of what the town or municipality might think?

MR. MILLER:

There would have to be some method of appeal, but I think its decision should be final, assuming the people on the board were properly qualified to make the decisions, and we would hope they would be.

DR. TROST:

Would you have some way of chucking them out if you got tired of them?

MR. MILLER:

I didn't go into details on this.

LAND USE AND RESOURCE DEVELOPMENT IN THE  
EASTERN SLOPES

Brief Presented by: C. SCHRODER

This brief was developed by a small group of people who have, over a period of years, hiked, fished, camped and hunted in the Eastern Slopes. Our interest is in preserving these areas so that future development does not decrease or spoil the future recreational activities for ourselves, our children and their children. We do not have the necessary resources and ability to comment knowledgeably on many of the technical and scientific aspects of land use and resource development. We expect that the Government has the necessary resources to answer these kind of questions. However, we do feel that we, by voicing our opinion, can contribute to the future policy of land use.

The quality of life is important to the average citizen. As we become more urbanized there is a growing need to leave the cities and escape to remote, unspoiled areas. The Province of Alberta has a unique opportunity to preserve this unrenovable resource for the future. If this area is allowed to be overdeveloped, there will be no chance to claim it back.

PREPARED BY:

Doreen Fettig

K. G. Newman

C. E. Schroder

A. J. Fettig

SOME GENERAL RECOMMENDATIONS:

1. While we support a multiple use concept in the management of the Eastern Slopes we feel that certain considerations should be used in judging the worth of any proposal.

This area is the prime watershed for Alberta and Saskatchewan. Any development is of secondary importance to this use and must be judged prudently as to how it will effect this resource. Over caution is advisable.

2. Commercial recreational development should be limited to providing services for those people who wish to enjoy those activities that are unique to the area. These would include camping, hiking, trail riding, fishing, boating, cross country skiing and hunting.

We support the development of commercial campgrounds in the highway corridors (providing that they meet standards comparable to those in the newer provincial parks), some hotels and motels, (again in the corridors), providing that these developments are aesthetically designed. Ski centres should be located at carefully selected sites where no damage will be done to watersheds and shall be limited in size so that they do not cover whole valleys.

Along forestry roads we suggest that service centres (i.e. gasoline, groceries, restaurants) be constructed at intervals of approximately forty miles. We strongly oppose the use of recreational land for the building of convention facilities, golf courses, snowmobile or other all-terrain vehicle runs and large commercial developments. Such commercial developments produce large concentrations of people which can cause excessive damage to vegetation and animal habitats, stream and other forms of pollution. Examples of proposed developments which we feel do not conform with our criteria for recreational land use are the Odyssey and Mount Cline Leisure Resort projects.

Proposed developments must be an asset to the Province of Alberta. They should be Alberta (or Canada) owned and should provide employment and financial benefits to the residents of Alberta.

An excellent example of senseless exploitation of Alberta's resources is the coal mine at Grande Cache. Consider the cost of the Alberta Resources Railway, as well as the royalties of ten cents per ton so that the coal can be shipped to Japan where it is used to produce steel. To add insult to injury, the finished steel is then shipped back to Vancouver at a price which Eastern Canadian mills can meet

2. only because of freight rate subsidies. Ironically, Alberta is one of the provinces which helps to pay for these freight subsidies.
3. Any proposed development should be carefully researched as to its feasibility before it is permitted to start. A development which fails could be a blot on the environment for years to come. This is an essentially important consideration in developing ski resorts. For instance, adequate snowfall is essential for such a development.
4. We oppose any development on prime grazing areas used by wildlife during the winter months. Already, the existence of certain big game animals (especially the Bighorn Sheep), is precarious because of the encroachment of man on their traditional winter grazing grounds. The Bighorn Dam and a number of cattle leases are contributing to this situation. A study should be made on the winter needs of big game animals and where these are not being met because of cattle grazing, these leases should be cancelled.
5. Silting and pollution of streams must be prevented. Adequate sewage treatment facilities should be provided at all developments and campgrounds. A minimum septic tank and sewage field for campgrounds



5. should be required. Outdoor privies close to streams should be immediately replaced.
6. The emphasis on management of the Eastern Slopes should be on self-renewal. While certain mining ventures are necessary, we strongly oppose strip mining because of the irreparable damages done to the environment. While certain "experts" state that the land which is stripped can be converted into productive land, others point to the lack of success in many areas of the United States. Reports by the Provincial Government, Department of Lands and Forests, indicated that reforestation is not being carried out according to schedule required by their leases. The existing regulations must be enforced. Other regulations regarding construction of roadways should be adhered to in order to reduce the silting of streams.
7. A complete ban on recreational use of snowmobiles and all-terrain vehicles within the study area is desirable. For those who come for quiet and relaxation, these vehicles create an unnecessary and irritating invasion; for wildlife, they are a curse. The fox hunt is replaced by a coyote or deer hunt. In certain areas they can cause long-term damage to the vegetation.(i.e. in alpine meadows). Hunting with the aid of snowmobiles should definitely be banned.

8. Forestry roads should be all-weather roads but we would question the necessity for paving these roads. We do agree that certain portions of these roads require upgrading.
9. Leased lands should be accessible to the public on an organized basis. Good examples of how timber companies can provide recreational opportunities exist in the Northwest States. The opposite exists in Alberta with companies putting up no-trespassing signs on public road allowances.
10. Wilderness areas should be protected by legislation. Changes should only be made in the House where all members have an opportunity to debate changes. At present, changes in policy can be made by an Order-in-Council.
11. Timber lease regulations should be revised to prohibit cutting within one quarter mile of any creek, stream or river.
12. Campgrounds (including Forestry campgrounds) should be developed so as to have adequate sewage treatment facilities, frequent garbage collection to discourage littering and scavenging by bears. Campgrounds should be looked after by a full-time attendant. A fee should be charged to campers to help offset the costs of these additional services.

13. Recreational areas should be developed close to major cities to relieve pressure on the Eastern Slopes. There are a number of areas close to Edmonton which could provide excellent recreational areas with varying kinds of appeal. For example, the North Saskatchewan River valley, Big Lake, Cooking Lake are three areas close to Edmonton. There are hundreds of such areas within a fifty mile radius of Edmonton.
14. Over a period of time, the Government should acquire the land adjacent to (i.e. one quarter to one half mile on either side of) all watercourses. This could provide corridors for wildlife, control erosion and be useful for recreation purposes.
15. The Oil and Gas industry has numerous gas and sulfur plants in the foothills area. Studies should be carried out to establish how these plants affect the adjacent areas. Seismic operations should be carried out with more care - access roads are hacked indiscriminately through the forested areas. The trees cut down by these operations should be used and not left to rot at the edge of the clearing. Again, any creeks or rivers which need to be crossed should be protected by legislation to minimize silting of these streams and prevent an excess number of crossings.

16. An article was reported in the Edmonton Journal regarding a proposed airport near Hinton. Subsequent discussions with Government officials disclosed that a large airport was also proposed for the Canmore area. The necessity for constructing airports at these locations which would be capable of handling large jet aircraft we feel, is very questionable.
17. No commercial and private development should be allowed within one quarter mile of any lake or stream. These areas should be retained so as to be available to the public. We object to the proposed Odyssey and Assiniboia projects for the above noted reasons.
18. No crown lands should be sold - only leased. The magnitude of these leases should be controlled so that they do not contain a larger area than is actually required.

In conclusion, we have noted in the local newspaper that numerous references are made to the fact that the average citizen is not taking part in these hearings. However, after conversing with numerous people in regard to these hearings, we are convinced that the average person is apprehensive of many of the proposed developments but there is still the normal reluctance to publicly express these apprehensions.

## QUESTIONING BY THE AUTHORITY

DR. TROST:

We've had a recommendation on more than one occasion that there be a ban on hunting one mile on each side of access roads. How would that strike you?

MR. SCHRODER:

I am not a hunter and I would have no opinion one way or the other. I think there may be a need to impose restrictions on hunting when the number of game animals is small. This may be a good way of decreasing the number of animals shot. In other cases there may be a need to harvest these animals and you may want to make it easier for the hunters.

910-1

B R I E F

from

THE NORTH WEST VOYAGEURS

addressed to the public hearings

on

Land Use and Resource Development in the Eastern Slopes

Presented By: D. Fackre

The Voyageurs represent a growing group of people from early youth to middle age who use the rivers of this province for recreational navigation by canoe or kayak or other types of river craft. For the purpose of this brief 'canoe' will refer to all types of river craft. The Voyageurs' activities can be broadly classified into two types: touring and white water.

As the name implies, touring or flat water canoeing is navigation downstream in comparatively quiet water. This type of recreation usually appeals to the sort of person who resorts to the wilderness for the peaceful enjoyment of silence and solitude coupled with mild adventure in an unspoiled environment.

White water navigation on the other hand is a thrilling sport in which the participant pits his skill, strength and courage against a turbulent series of rapids which are never the same on two successive days. Whitewater navigation is a comparatively new sport in Western Canada. It originated in Central Europe, was exported to Eastern Canada and has only been established recently in the rivers of the Eastern Slopes.

As an indication of the importance of Whitewater Racing in the recreational world, the Canadian Championships in 1972 were held on the Panther and Red Deer rivers on July 1st and 2nd, 1972. For the first time in the history of the Summer Olympics Whitewater Slalom racing was featured as an event. Although the sport is as yet relatively new to Western Canada, the above races were attended by active participants and the crowd of spectators was estimated as some 500 strong.



During the spring and early summer the Northwest Voyageurs hold training sessions weekly on the Saskatchewan river at the mouth of Whitemud Creek within the corporate boundaries of the City of Edmonton. Any person interested in canoeing is welcome to attend these sessions to learn the rudiments of watermanship and to receive assistance in becoming involved in this type of recreation.

In addition, training sessions are held throughout the winter in one of the University of Alberta swimming pools. The objects of these training sessions are to inculcate a respect for safety, confidence on the water and to teach basic skills with the paddle.

The Northwest Voyageurs also own a number of water craft which are available to the public at a reasonable rental. The purpose of renting equipment is primarily to enable people to get the feel of the river before deciding on the purchase of their own equipment.

Another activity of the Voyageurs is the construction of canoes and kayaks. In order to reduce the initial cost of equipment and to develop craft most suitable for our rivers members of the Voyageurs have embarked on an aggressive construction program of the cooperative type, whereby any member is able to build his own boat at a cost of approximately fifty per cent of the commercial product.

Membership in the Voyageurs organization is open to any member of the Canadian Youth Hostel Association for the nominal fee of two dollars per annum.

In view of the growing urbanization of Alberta, the prospect of a shorter work week, and the increased need for outdoor recreational facilities, it is not unreasonable to predict that canoeing will expand similarly to

the expansion of skiing during the past dozen years. Indeed, the two types of recreation have much in common, -- the appeal to the outdoors, the sense of adventure, the development of skills, the thrill of accomplishment, -- all these are typical to both the skier and the white water enthusiast. But there is a difference in the necessities for the two recreations. The skier must have the destructive clearing of slopes, costly lifts and expensive chalets. The canoeist asks simply for an undisturbed stretch of river, a rough access road to 'put in' his canoe, and an access road downstream to 'pull out'. The canoeist makes a minimum demand to alter the environment.

As an indication of the Provincial Government's attitude towards canoeing, the Department of Culture, Youth and Recreation has included courses in canoeing in the curriculum of the Alberta Outdoor Education Center at Blue Lake. The Edmonton Public School Board has offered courses in canoeing which have been well received.

In view of the extensive activities of the Voyageurs the membership feels that it has the right to express an opinion to the Public Hearings on the Eastern Slopes for such purposes as tourism, recreation, watershed conservation, wilderness and natural areas.

A list of appendices is attached. But in brief and in general, The Voyageurs make a strong plea for the following:

1. River and stream banks are to be left undisturbed.
2. Where pipe line crossings are necessary, installation and cleanup must receive the approval of the Department of the Environment.
3. That timber and other vegetation within one hundred and fifty yards of high water mark of all streams and rivers be left undisturbed except for officially designated camp sites.

4. That a discreet number of campsites specifically intended for canoeists be established on streams and rivers and that these 'canoe' campsites be not accessible by road.
5. That all industrial development be prohibited from releasing any undesirable liquid or solid residue into any river or stream.
6. That watershed conservation be a factor of paramount importance when development of any sort is under consideration.
7. That lease or private ownership of lands within the Eastern Slopes be strictly limited in order that the public is not denied the use and enjoyment of the Eastern Slopes.
8. That A Wild Rivers Act be placed on the Statutes of Alberta, -- the purpose of such legislation would be to ensure that stretches of several uncontrolled rivers would be left in their natural state for perpetuity.
9. That the use of off-road vehicles for recreational purposes be confined to designated areas.
10. That craft with internal combustion engines be excluded from eastern slope rivers.
11. That the Government of the Province of Alberta institute a continuing inventory of environmental data in each stream and river valley.

It is unlikely that any reasonable person will successfully challenge the concept of multiple land use in the long term planning and management of the Eastern Slopes. 'Multiple Use' includes water-shed protection, forest production, recreational development, fish and wildlife management, grazing, and industrial development.

In order to reduce conflict amongst different uses, data must be available. Reliable and introvertible biological data cannot be obtained

quickly. Hence the recommendation for an continuing inventory. It is acknowledged that the gathering of data will be an expensive procedure. Equally important will be the cataloguing, storage and retrieval of data. But it should be remembered that multiple use management refers not to years or decades but to half and whole centuries.

In conclusion the Voyageurs take the position that the development of any non-renewable resource is secondary to the value of renewable resources and that the aesthetic value of the unspoiled environment is our most valuable renewable resource.

Daniel S. Fackre  
President.

Annabel Gilpin  
Secretary.

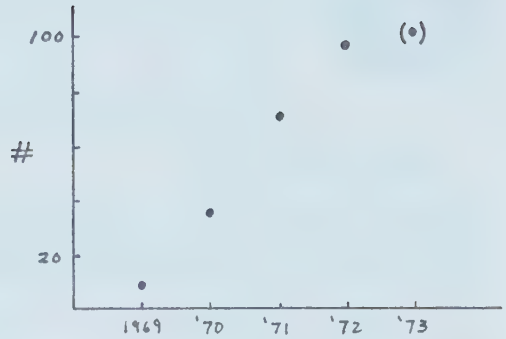
List of Appendices

1. Data showing growth of Voyageurs.
2. Map of rivers in Alberta run by the Voyageurs.
3. Trip Schedules for 1972 and 1973.
4. Events at the Canadian National Whitewater Championships, July 1,2 and 3, 1972, on the Red Deer and Panther Rivers.
5. Brochure describing the N.W. Voyageurs and its activities.
6. List comparing the cost of boats built by members of the club and purchased from commercial firms.
7. Brochure describing the Canadian Youth Hostels Association.
8. List of current courses available at the Alberta Outdoor Educational Center.
9. List of proposed canoe campsites.
10. Wild Rivers Act proposal and map.
11. Estimate of numbers of boaters who used the North Saskatchewan River on the site of the Big Horn Dam and reservoir. Used to illustrate a point in Appendix 10.
12. Point 9. on offroad vehicles -- comment that an offroad vehicle is advertised travelling down a stream bed and "doing a minimum of damage to the environment".

## Appendix 1

## Growth of Voyageurs

<u>Year</u>	<u>Members</u>
1969	9
1970	36
1971	71
1972	98
1973	(102) to June 30



## Appendix 2

See attached map I. Rivers in Alberta run by the N.W. Voyageurs.

## Appendix 3

See 1972 and 1973 Trip Schedules, following.



# 1973 TRIP SCHEDULE

## Regulations for Trips

All participants must register in the Trip Book at the CYHA office by Thursday evening for weekend trips. This may be done by phoning 439-3089. Food, canoe rental, transportation, camping arrangements and a paddling partner are the responsibility of each individual. Arrange these from the Trip Book.

Leaders reserve the right to limit the number of participants and their placing in boats by experience.

Non-members are allowed on two trips without becoming club members.

All those participating in club trips must wear suitable life jackets. In addition, special protective gear such as helmets and wet suit jackets or paddling jackets will be required on some whitewater trips. All open canoes should be equipped with 20' safety lines on bow and stern. Additionally, craft should have 6" dia. bow and stern grab loops, spare paddles and adequate floatation to support it in level trim when completely filled with water. In the interest of safety, club rules will be followed and trip leaders' decisions are final. A waiver form must be signed by all paddlers.

Canoes may be rented from the CYHA; 439-3089.

Detailed information on each trip will be posted in the CYHA office & Mountain Shop one week prior to the trip.

If you require instruction, attend the training sessions held at the mouth of Whitemud Creek each Tuesday at 7 PM. from May until mid-September.

All trips involve camping unless otherwise noted. Trips may be re-scheduled or cancelled due to water conditions or lack of interest.

## DATES

## TRIP

## RATING\*\*\*

April	<u>Various</u> , depending on breakup; Battle, Whitemud, Redwater Sturgeon, Blindman.	
April 29	<u>Whitemud Park</u> Get-together. Bring food, drink and boats.	
May 5,6	<u>Sturgeon R.</u> Training and tours each day. No camping.	I,II
May 12,13	<u>Pembina R.</u> ; Lodgepole to Easyford <u>N. Sask. R.</u> ; Drayton to Berrymore	I+ Novice I+ Novice
May 12,13	<u>Sturgeon Races</u> ; Sat. - Slalom everyone can try, Sun. - Downriver no camping.	II Intermediate I+ Novice
May 19 20 21	<u>Sundre, Red Deer R.</u> Race Monday, practice Sat. & Sun. Tours above & below Sundre, WW runs above Coal Camp, with the Red Deer & other clubs. First full meeting of the Alberta Recreational Canoe Association.	II+ to III Inter. to Expert



May 26,27	<u>Two Trips in the Clearwater - Rocky Area</u> <u>Clearwater R.</u> ; Forestry Trunk Rd. to Dovercourt Br. Fast, twisting river; for experienced paddlers in open boats. - - - <u>Second trip set - Sat.</u> ; Clearwater R. from Dovercourt Br. to Rocky Mtn. House. <u>Sun.</u> ; Rocky Rapids on N. Sask. R.	II+ to III Intermediate I to II, good novice training
June 2,3	<u>N. Sask. R.</u> ; Nordegg Br. to Rocky Mountain House with the Red Deer Club. Many rapids, open boats should have spray cover. Camping along river with all gear carried in boats.	II+ Inter.
June 2,3	<u>Brazeau R.</u> ; whitewater trip, from Forestry Trunk Rd. down, downriver boats recommended.	II to III Expert
June 9,10	<u>McLeod R.</u> ; Forest. Trunk Rd. to Medicine Lodge, exploratory. Medicine Lodge to Marlboro.	II+ Inter. II
June 9,10	<u>Red Deer R.</u> ; Garrington Br. to Innisfail, run by the Red Deer Club - contact them for registration, 346-4750.	I Novice
June 16,17	<u>Red Deer R.</u> ; Nevis (Dad's Cafe, Hwy.21) to Rumsey Br. Very pleasant, lots of wildlife	I Bring everyone
June 16,17	<u>Highwood &amp; Sheep Rivers</u> ; whitewater trips with the Red Deer Club.	III Expert
June 23,24	<u>Provincial Races</u> - Slalom and Downriver. With all clubs, details later.	
June 30	<u>Jasper Park Tours and Whitewater Trips</u>	
July 1,2	Tours on Athabasca and Miette Rivers Whitewater runs on upper Miette & Athabasca Rivers, Maligne R. and Sunwapta R. above and below falls. With the Red Deer Club.	I+ Novice II, III Intermediate to Expert
July 7,8	<u>Rocky Rapids</u> - N. Sask River near Rocky Mtn. House. Horburg to Rocky and short trips. Everyone can paddle, all rapids can be run or avoided.	I to II
July 7,8	<u>Upper Red Deer River</u> ; whitewater trips; Mountain Air lodge to Coal Camp, above Mtn. Air Lodge, Panther River.	II to III Expert
July 14,15	<u>N. Sask R.</u> ; Rocky Mountain House to Drayton Valley, with the Red Deer Club. Two day tour on a big river, camping along river.	II+
July 21,22	<u>Banff Park Tour and Whitewater Trips</u> Tour on Bow R. from Lake Louise Br. to Hwy. 1 Br. Whitewater runs on upper Bow, Cascade, others.	I+ Adv. Novice II to III
July 28,29	<u>Coal Branch Area</u> Exploratory Trips; Brazeau R. above Trunk Road, Cardinal, Upper McLeod Rivers, with the Red Deer Club.	II to III Expert
Aug 4,5,6	<u>Upper North Saskatchewan River</u> ; along Hwy. 93, Sask. R. Crossing (Hwy 93) to Siffleur Br. Scenic trips on a fast river, with the Red Deer Club.	II Inter.
Aug.4,5,6	<u>Lower Smoky River</u> ; exploratory trips, Hwy. 34 to Watino or Watino to Peace River. More details later.	II Inter.

Aug. 11,12	<u>Lesser Slave Lake</u> ; surf paddling, relaxing with the Red Deer Club. Bring everyone.	I, II
Aug. 18,19	<u>Athabasca River</u> ; Hinton area. Rocky to Fiddle Rivers, Brule Lake outlet to Hinton. Painless way to explore this stretch.	I+
Sept. 1,2,3	<u>Upper Columbia</u> ; along the Big Bend. Donald Station to Mica Dam <u>or</u> Mica Dam to Revelstoke. A longer trip through the mountains of the Rocky Mountain Trench. Camping along river, with the Red Deer Club.	II+ Inter.

Unscheduled trips may be organized from time to time during the year. Watch for postings in the CYHA office. Trips may include the following;

Tours - Red Deer R.; Innisfail to Red Deer City or through the Badlands, Lower McLeod R., Pembina, Lesser Slave Rivers, Athabasca above or below Whitecourt	Whitewater - Kananaskis, Upper N. Thompson, Upper Old Man, Waterhen R. (Sask.)
---	--

#### Explanation of Ratings

The following scale, recognized internationally, is used to rate rivers and stretches of rapids.

Class I	Easy - for practiced beginners; some small rapids, small waves, few obstacles
II	Medium - for intermediate paddlers; rapids more numerous, current faster, unobstructed courses with passages easy to recognize.
III	Difficult - for advanced intermediate paddlers; manoeuvring in rapids necessary, faster currents, high waves, obstacles numerous, course not always easy to recognize, general limit for open boats.
IV	Very Difficult - highly skilled paddlers; scouting necessary, fast precise manoeuvring, long rapids, irregular waves, strong eddies cross-currents and sharp bends.
V-VI	Exceedingly Difficult to Limits of Navigability - team of experts with extensive experience, very strong currents, extreme turbulence, big drops, very steep gradients, extensive scouting.

NOTE - this rating system is not based exclusively on wave height, rapid length or manoeuvring required. Other factors such as river width and remoteness, to name a few, are taken into account. See the River Rating Chart in the Safety Code.

WHITEWATER trips will require specialized craft. Whitewater slalom boats are those that are easily manoeuvrable and have a deck or suitable spray cover. This excludes double kayaks and the majority of keeled open canoes equipped with spray covers. However, the latter types of boat can be considered whitewater downriver craft, suitable in high waves where sharp turning is not required.

For further information about trips contact the CYHA @ 439-3089 or Trip Chairman or Secretary, N.W. Voyageurs, 16922 88 Ave. Edmonton, Alberta, T6G 0Z1



910-12

# ALBERTA WHITEWATER ASSOCIATION

Dear Competitor:

The Alberta Whitewater Association is happy to be sponsoring the 1972 Canadian National Whitewater Championships. This year's nationals are taking place on some of the finest white water available in western Canada, situated in a scenic region of the Rocky Mountain foothills of the upper Red Deer River watershed. We have a tremendous three-day program planned to help make the races more fun for competitors and spectators alike. We hope you enjoy your stay in Alberta, and we want to wish everyone the best of luck.

Attached is a map marked with the general area of the race site. In the racing area there are three campsites, free of charge. We do ask that you abide by any Forestry Reserve regulations posted in the area. This is the first time competitions of this type have been held in a Forestry Reserve and we have assured the Provincial Government of our fullest cooperation in compliance with their wishes. A campsite has been selected just for competitors - the entrance will be marked. The slalom site is more than a comfortable walk from the competitors campsite, so we suggest you take lunches with you on race days.

Provision has been made to have repair materials at the campsite. A small donation per repair would be appreciated. We are trying to get the use of a large tent so that repairs can be made out of the weather.

As the campsite is approximately 20 miles from the town of Sundre, we are encouraging one of the local food merchants to visit us with a truckload of supplies two or three times during the races.

Your entry form, with an information section to help our announcer, is also enclosed. Please try to return it by June 20, 1972.

## IMPORTANT

Calgary is the largest major city close to the race site. Those flying into Alberta should attempt to land in Calgary. Anyone wishing transportation to and during the races, or overnight accommodation in Calgary, should contact Lynda Daniel at the address below, as soon as possible. Bring your own sleeping bag.

1140 Lake Bonavista Dr. S.E.  
Calgary 33, Alberta.

Home: (403) 271-7797  
Off.: (403) 267-6421

## ITEMS OF INTEREST

1. A.W.A. President - Keith Muir, P.O. Box 278, Lacombe, Alberta.
2. Race Chairman and Alberta Provincial Coach - Keith Daniel.
3. Calgary Stampede is July 6 - 15th. Parade day is Monday, July 10th.



# ALBERTA WHITEWATER ASSOCIATION

## SCHEDULE OF EVENTS

- Saturday  
July 1, 1972
- Open practice until 12:00 Noon.
  - 1:00 - 1:30 PM opening ceremonies at Mountaineer Lodge
  - 2:00 PM start of downriver races - Panther River. Order of classes: KI, KIJ, KIW, CII, CIIJ, CI, CIJ and CIIM
  - Evening - dinner for competitors, officials, etc. in Sundre, Alberta followed by presentation of trophies.
- Sunday  
July 2, 1972
- Open practice on slalom course until 9:30 AM
  - 10:00 AM first run of slalom. Order of classes: KI, KIJ, KIW, CI, CIJ followed by CII, CIIJ and CIIM Teams
  - Afternoon - second runs in the same order, plus teams.
- Monday  
July 3, 1972
- Open practice on slalom course until 8:30 AM
  - 9:00 AM first run of slalom. Order of classes: CII, CIIJ, CIIM followed by KI, KIJ, KIW, CI, and CIJ Teams
  - Second runs will start as soon as first runs finish.
  - Presentation of trophies after all scores are compiled.

## RULES OF SPECIAL INTEREST

1. Life jackets and helmets must be worn during the races and practice. Wet suits and vest pocket preservers do not constitute a life jacket. (Western rivers are cold, some wet suit clothing might add to your comfort). Competitors should be able to swim.
2. All boats must be equipped with end loops and flotation. Boats will be measured and must meet I.C.F. specifications for their class. Any not meeting the specifications will not be allowed to enter.
3. A competitor not in his boat when called will be disqualified.
4. I.C.F. rules will govern the race, but should there be any dispute not covered, the Race Chairman's decision is final.
5. The Race Chairman reserves the right to refuse entry to any person or boat endangering themselves or participants, or to anyone guilty of unsportsmanlike behaviour.
6. Protests must be presented to the Race Chairman not later than 15 minutes after the final scores have been posted. As per I.C.F. rules the required protest fee must accompany each protest, to be returned if the protest is upheld.
7. Whitewater racing is as much a fight against the elements as it is against each other. Any competitor seeing another in real danger shall give him all of the assistance in his power.
8. Numbered bibs will be issued before the race. A charge of \$3.00 a bib will be levied for those not returned.

## Appendix 6

Cost comparison between boats built by members of the Voyageurs and purchase price of comparable commercial boats.

<u>Type of boat</u>	<u>Built price</u>	<u>Purchase price</u>
16' open canoe	\$ 100	\$ 250 - 300
16' decked canoe (for touring)	110	\$ 500 (Vancouver)* 420 (Seattle)** 435 (Maine)**
13' slalom (white- water) kayak	80	275 (Edmonton) \$ 225 - 280 (various places in U.S.)**
14'8" downriver racing kayak	90	250 - 290 (various places in U.S.)**
15' slalom (white- water) canoe	120	\$ 487 (Vancouver)* \$ 300 - 355 (various places in U.S.)**
16'5" downriver racing canoe	105	\$ 300 (Massachusetts)**
17' decked canoe (for touring)	135	no comparable boat made

\* Cost does not include crating and shipping.

\*\* Duty, crating and shipping costs not included.

COURSE ADVERTISING FOR JUNE

<u>COURSE NUMBER</u>	<u>JUNE</u>	<u>FEES: \$8.00 PER DAY</u>
* #B-5020	2-3	<p><u>LEVEL I - INTRODUCTORY LAKE CANOEING -(2-DAY)</u>  <u>PREREQUISITE:</u> an ability to swim at the Red Cross Junior Swimmer or Survival Swimmer Award Level.            An elementary canoeing course for those with no experience in canoeing. This course will teach all skills basic to lake canoeing, including strokes, choice of canoes, equipment, lifejackets, canoe safety, rescue methods, artificial respiration and single and double paddling. FEE: \$16.00</p>
#B-5021	2-3	<u>ENVIRONMENT STUDY - (2-DAY) FEE: \$16.00</u>
#B-5022	2-3	<u>ORIENTEERING FOR BEGINNERS</u> - As above
#B-5023	2-3	<u>SAILING FOR BEGINNERS</u> - As above
* #B-5025	9-10	<p><u>LEVEL I - INTRODUCTORY LAKE CANOEING - (2-DAY)</u>  <u>PREREQUISITE:</u> an ability to swim at the Red Cross Junior Swimmer or Survival Swimmer Award Level. An elementary canoeing course for novices. \$16.00 fee.</p>
#B-5026	9-10	<u>FLY FISHING FOR BEGINNERS</u> - \$16.00
#B-5027	9-10	<u>BACKPACKING &amp; HIKING IN THE WILDERNESS</u> - \$16.00
* #B-5028	16-17	<p><u>LEVEL II - INTRODUCTORY RIVER CANOEING</u> - \$16.00  <u>PREREQUISITE:</u> LEVEL I course and experience OR a good background in lake canoeing and Red Cross Junior or Survival Swimming standards.</p>
#B-5029	16-17	<p><u>LEVEL I - ADVANCED ORIENTEERING</u> - \$16.00  <u>PREREQUISITE:</u> Beginner course or equivalent experience. Must provide own compass. Involves theory and practise of setting and solving orienteering problems, includes types of events, competitive map and compass techniques, basic course setting theory, orienteering teaching games, basic map production.</p>
#B-5030	15-17	<u>WILDERNESS SURVIVAL - ADVANCED LEVEL (3-DAY)</u> \$24.00
* #B-5031	23-24	<p><u>LEVEL I - INTRODUCTORY LAKE CANOEING (2-DAY)</u>  <u>PREREQUISITE:</u> an ability to swim at the Red Cross Junior Swimmer or Survival Swimmer Award Level. An elementary canoeing course for novices. \$16.00</p>
#B-5032	23-24	<u>FLY FISHING</u> - \$16.00
#B-5033	23-24	<u>ENVIRONMENT &amp; RESOURCES</u> - \$16.00



## Appendix 9

## Proposed Canoe Campsites

Athabasca R. - near the mouth of the Berland R.

N. Saskatchewan R. - right bank (south bank) between Trout and  
Rough Creeks; Nordegg - Rocky Mtn. House  
stretch  
- near the mouth of the Baptiste R.  
- between the mouth of the Brazeau R. and Blue  
Rapids

Red Deer R. - adjacent to McCue Creek  
- near Vam Creek between Red Deer R. crossing  
and Sundre town

Brazeau R. - near the mouth of the Blackstone R.



## Appendix 10

## WILD RIVERS ACT PROPOSAL

We urge a Wild Rivers Act to be divided into at least two categories.

1. Truly wild rivers would be left in their free-flowing, natural state for perpetuity and their watersheds minimally developed.

2. Preserved rivers; left in their free-flowing, natural state and no development or alteration of natural vegetation or land within the river valley or within one hundred fifty yards of the high water mark where the river valley is not present or ill-defined. In both cases alterations not to be visible from the river.

The Eastern Slopes watershed supplies approximately 90% of the water to rivers arising within its boundaries and flowing to the east. This same watershed supplies two-thirds of the water to rivers arising in the mountain National Parks further west and flowing through the Eastern Slopes.<sup>1</sup> It is essential that good management of these watersheds is practiced to insure a continuing supply of clean water to the populous areas to the east. We define good watershed management to be little or no removal of the natural cover or ground surface and no impoundment or diversion of rivers or streams.

It is agreed upon by hydrologists, foresters, biologists and environmentalists that river impoundments for power generation

1. "Selected Characteristics of Streamflow in Alberta"; by C.R. Neill et. al., Research Council of Alberta, 1970.

and flood control are poor watershed management. Firstly because of the large scale, long term damage to the natural environment; some of these damages being the flooding of lands supporting wildlife and the flooding of spawning streams for fish, the erosion of the reservoir banks contributing to its eventual filling, the removal of the biologically and economically productive forest cover to make way for the reservoir, the greater erosion downstream of the dam resulting from the greater power of the river caused by the loss of its suspended load in the holding reservoir, the possible creation of oxygen-poor, odorous water in the reservoir later released downstream with its deleterious effect on fish reproduction and other forms of life and finally damages to the beauty of historic and scenic river valleys by the creation of a mud-banked reservoir with widely fluctuating water levels containing floating and submerged trees brought from upstream, denying for from tens to hundreds of years the recreational potential of the river (see Appendix 11).

Secondly, impoundments are poor management because of their limited life. Reservoirs eventually fill with suspended matter brought down by rivers and by the erosion of their banks. This problem being especially acute here on the Eastern Slopes. Perhaps the citizens of this Province are willing to pay a higher price for electricity if they can be assured of unflooded recreational areas in the Eastern Slopes watershed.

Thirdly, impoundments flood traditional Indian hunting grounds, farms and homesteads and other works and activities of

man.

Finally it is argued that impoundments create beneficial flood control as a by-product of power generation. However, in this Province the amount of productive land on flood plains is vanishingly small, simply because most of the rivers are deeply entrenched or where they are not entrenched, pass through areas with low productivity.

For the above reasons the North West Voyageurs recommends that the water flowing through an impounded or diverted river be designated a non-renewable resource.

It is coincident that both good watershed management and recreational paddling demand free-flowing, clean rivers. For these reasons the North West Voyageurs strongly urge that the Provincial Government take appropriate steps to enact a Wild Rivers Act to preserve in perpetuity the remaining free-flowing rivers and free-flowing stretches of impounded rivers and their tributaries not only within the Eastern Slopes but in the remainder of the Province.

The following rivers and their watersheds would be placed in category 1 above;

A. Rivers not within the Eastern Slopes,

Hay River and its tributaries

Wabasca River and its tributaries

Birch River and its tributaries

Athabasca River between the La Biche River and the Town of Fort McMurray

The northern Clearwater River (flows into Athabasca River)

## B. Rivers within the Eastern Slopes,

Smoky and Wapiti Rivers and their tributaries, lying outside Jasper National Park, upstream of their confluence

Athabasca River between the Jasper National Park boundary and its confluence with the McLeod River

Berland River and its tributaries

Wildhay River and its tributaries {lying outside Jasper National Park

McLeod River and its tributaries upstream of its confluence with the Embarras River

Embarras River and its tributaries

Brazeau River and its tributaries from the Jasper Park border to the Brazeau Dam

Ram River from its various sources to its mouth

the southern Clearwater River and its tributaries outside Banff National Park from their sources to the present boundary of the Clearwater-Rocky Forest Preserve

Red Deer River and its tributaries lying outside Banff National Park to the town of Sundre

the Oldman River and its tributaries lying within the Rocky Mountain Forest Preserve

Protected Rivers to be placed in category 2. above;

## A. Rivers not within the Eastern Slopes,

Peace River from the British Columbia border to the confluence with the Smoky River

Smoky River from the mouth of the Wapiti River to its mouth on the Peace River

Athabasca River from its confluence with the McLeod River to the mouth of the La Biche River and from the town of Ft. McMurray to the Boundary of Wood Buffalo National Park

Pembina River from its border with the Eastern Slope Area to a point 2miles downstream of the present northeast border of the Pembina River Provincial Park

North Saskatchewan River from its intersection with the Eastern Slopes Area border to the existing Genesee Bridge

Red Deer River from its intersection with the Eastern Slopes Area border to the present town of Drumheller and in the present Dinosaur Provincial Park

Oldman River from Lethbridge to its confluence with the Bow River and the resulting South Saskatchewan River to the Saskatchewan border

B. Rivers within the Eastern Slopes,

Pembina River from its source to the Eastern Slopes Boundary

North Saskatchewan River from the Banff National Park Boundary to the Eastern Slopes Boundary

Red Deer River from the town of Sundre to the Eastern Slopes Boundary

Sheep and Highwood Rivers from their sources to the Eastern Slopes Boundary and thence to their confluence to form the Highwood to its mouth

Oldman River from the boundary of the Rocky Mountain Forest preserve to its confluence with the Castle River

## Appendix 11

Use of the North Saskatchewan River on the site of the Big Horn Dam and Reservoir.

We estimate that between 100 and 1000 paddlers used the river in this area. If the estimated life of the reservoir is between 100 and 200 years, 10,000 to 200,000 people using the river for recreation will be denied its use. Contrary to advertised comments that the reservoir can be used for recreational boating, we and other canoe clubs in the Province believe that the fluctuating water levels, exposed mud flats, high winds and trees in the reservoir will create an environment not suitable for boating. The majority of these persons using the river were from outside the Province. The North West Voyageurs and other member clubs of the Alberta Recreational Canoe Association cannot now recommend the use of this flooded stretch for paddling to the many individuals who write them.

## QUESTIONING BY THE AUTHORITY

DR. TROST:

How long has your association been in existence?

MR. FACKRE:

The club has had a rebirth during the last five years but it existed for a long time before that.

DR. TROST:

How many members have you?

MR. FACKRE:

Right now we have 102 I believe.

DR. TROST:

I was interested in your recommendations which were for the most part broadly based. You recommended that camping facilities on the rivers, which would be used by the canoeists, not be available to anyone who didn't come by water. Need it be so exclusive?

MR. FACKRE:

Yes, because there is the problem of vandalism. The Canadian Youth Hostels Association, in operating its hostels on the eastern slopes mainly in the mountain parks, runs into this problem continuously.

DR. TROST:

What about the alternative of having youth hostel facilities as your campsite?

MR. FACKRE:

The number of people going on voyageur trips usually precludes the use of hostels.

DR. TROST:

Your recommendation really contradicts the main tenor of your submission in that you are here asking for exclusive rights for a small group.

MR. FACKRE:

No, we're asking for canoe campsites for any canoeist or paddler or raftsman who uses the river. There is one existing canoe campsite within Banff National Park. It is about five miles upstream from the townsite itself on the Bow River. This was built by the federal government at the urging of the Calgary Canoe Club. They, as the parent club in the province, have since been urging us to establish more of these.

DR. TROST:

What type of facility would you need for your campsite? Would you need a canoe rack system or anything of that sort?



MR. FACKRE:

No, we would need just a shelter. The problem with canoeing in this province is not with rapids and such. We have enough expertise to overcome these. The problem is the distance between the points we have to canoe. For instance, I make the recommendation in the appendices for a canoe shelter on the North Saskatchewan River between Nordegg and Rocky Mountain House. This is a very popular stretch of river for canoeists from the province and other parts of Canada. There is no easy access.

DR. TROST:

How frequently would your campsites be spaced?

MR. FACKRE:

We ask for seven on various well-used rivers in the province.

DR. TROST:

Would you canoe up the river?

MR. FACKRE:

Just down.

B R I E F

FOR THE PUBLIC HEARINGS  
ON LAND USE AND RESOURCE DEVELOPMENT  
IN THE EASTERN SLOPES

FROM  
THE ALBERTA INSTITUTE OF PEDOLOGY

PRESENTED BY:

DR. J.A. TOOGOOD  
AND  
DR. W. PETTAPIECE

# THE ALBERTA INSTITUTE OF PEDOLOGY

Advancing Soil Science in Alberta

Canada Department of Agriculture  
(Alberta Pedology Section)  
The University of Alberta  
(Soil Science Dept., Fac. of Agr. & For.)  
Research Council of Alberta  
(Soils Division)



236 Agriculture Building  
The University of Alberta  
Edmonton, Alberta, Canada  
T6G 2E1

## A BRIEF FOR THE PUBLIC HEARING ON LAND USE AND RESOURCE DEVELOPMENT IN THE EASTERN SLOPES

The Alberta Institute of Pedology at the University of Alberta consists of scientists engaged in fundamental and applied research in soil science. Its members, employed by Agriculture Canada, the Research Council of Alberta and the University of Alberta are interested in and concerned with land use and resource development in the Eastern Slopes.

Soils are a natural expression of the past and present interactions of the biosphere and atmosphere with geologic material. We are of the opinion that a knowledge of the chemical, physical and biological properties as well as the areal distribution of soils is essential for the proper planning and evaluation of environmentally oriented projects. Soils support life, and a knowledge of their natural resilience to man's activities is of paramount importance, especially in mountainous areas where a fragile ecological balance often exists. We recognize the need for studies of subsoil from an engineering point of view. However, such studies are often site specific and thus cannot be utilized in the planning of larger areas, particularly in regions such as the Eastern Slopes where natural conditions are so variable. We also recognize the need for surficial and bedrock geology studies, but these do not consider the relatively thin soil at the surface with physical, chemical and biological properties that differ significantly from those of the under-

lying material. To illustrate this point, an example can be taken from studies of the North Saskatchewan River Valley in the Cline River area. The surficial geologist indicates a carbonate-cemented glacial material which would be quite stable and not subject to erosion. However, a soil survey recognized that there is commonly 4 to 8 inches of silty aeolian material on the surface. This material is loose, poorly structured, has poor trafficability characteristics and is extremely vulnerable to erosion if exposed. This is important for planning.

We would draw to your attention a number of recent cases where pedological investigations have constituted a part of Park and Recreational area studies in Alberta. These include studies of Waterton Lakes National Park and a Great Divide Trail study, all commissioned by the National and Historic Parks Branch, Department of Indian Affairs and Northern Development. Also, at the request of the Provincial Parks Division, Department of Lands and Forests, detailed soil inventories have been made of a number of provincial parks, both existing and proposed. In these studies the soils have been interpreted for use in developing recreational facilities, such as location of campground or trails, for susceptibility to erosion, for trafficability and for other land use aspects. Drainage, an important soil attribute, is a major factor in many of these, and other, interpretations.

We would also draw to your attention recent cases where pedological investigations have been used in resource development operations. A case in point is a current study by members of our Institute on effective methods of land reclamation after strip mining at Grande Cache. Our Institute has also been involved in studies of effects of pipeline construction on soil fertility, reclamation techniques around sulfur extraction plants and microbial decomposition of crude oil spills.

A significant amount of soils information has been collected for areas within the Eastern Slopes over the past 30 years. Concepts and methods have, however, changed and developed in this time and to be able to utilize this information properly one must be aware of these changes as well as the inherent limitations such data may possess. In the Information Bulletins received to date only one has made any reference to soils and their distribution.

In view of the above mentioned cases and facts, and based on the belief that pedological information provides one of the essential inputs in planning operations, and because there is a substantial amount of information presently available which we feel is not being used to its full potential, the Alberta Institute of Pedology respectfully submits the following recommendations:

1. That no substantial planning or development in the Eastern Slopes should be considered without appropriate pedological information being supplied and interpreted by trained pedologists,
2. That an experienced pedologist, aware of the recent changes that have occurred in concepts and methods of soil investigations, be consulted when previously published soils information is utilized and that a pedologist also be consulted prior to the utilization of any subsequent soils information, and
3. That a knowledge of soils and the application of this knowledge is fundamental to all ecological considerations in the Eastern Slopes and all other regions of Alberta.

Respectfully submitted on behalf  
of the Institute,  
J.A. Toogood, Chairman

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

You raised the subject of reclamation in the forested areas that are used for strip mining. We've been looking at some of the reclamation practices which have been going on, and looking at soils that appear to be completely deficient as far as any material beyond the basic substances. We seem to be getting good growth encouraged by the introduction of fertilizers. What happens when the fertilizer is used up? Is there a possibility that even with the good weathering that takes place on this material, there will be sustained growth on these soils?

DR. PETTAPIECE:

Yes, I think there is a good chance of sustained growth. Certainly it's not going to be the lush vegetation you see in some well-fertilized plots. It will be a much lower level, more like the natural conditions, possibly, in the same situation. The soil mellows to quite an extent under natural conditions. I would suggest that probably after a period of time these soils will develop and sustain themselves without the continued application of amendments.

MR. KINISKY:

How long do you think, considering the cover used there, we are going to have to use artificial fertilization and perhaps even watering to sustain this growth before we get enough organic material that it sustains itself?

DR. PETTAPIECE:

It could probably sustain itself after a few years, perhaps one or two. However, it depends to some extent on the level at which you want it sustained. If wildlife management wanted to use these kinds of sites for grazing then you would be in a slightly different situation.

MR. DOWLING:

There has been an expression of great concern with respect to seismic cut lines in the eastern slopes, some of which have eroded a great deal after the short-term use of any specific cut line had been completed. Have you been approached by the oil industry as to possible solutions to correct these erosion problems on cut lines?

DR. PETTAPIECE:

Some of the fellows have been consulted, particularly about the Swan Hills area where there were some very severe problems. The same things, of course, apply to any seismic line. Again, most of them have been after the fact in which case you are looking at rather drastic reclamation projects. There is no specific set of recommendations developed for seismic lines, if this is what you are wondering about.

MR. DOWLING:

I was wondering what sort of procedures might possibly be followed. You are saying that there is no solution known now, but you are working towards one. Is that correct?

DR. PETTAPIECE:

No. There are several solutions being used on seismic lines. To start, with many of the more recent lines much better techniques are being used for cutting the lines that are not destroying the surface quite as much; erosion is not a problem. Second, many are grassing in their lines quite well and have stabilized them to quite an extent.

MR. DOWLING:

Are you speaking of current or older lines?

DR. PETTAPIECE:

The old ones.

MR. DOWLING:

How extensive a soil inventory do you actually have, or does one exist for the eastern slopes?

DR. PETTAPIECE:

On a relatively up-to-date basis, there is not that much. There is a good inventory on a reconnaissance basis for the Hinton, Edson and Chip Lake area - the whole corridor running through the Yellowhead - in preparation at the present time. It has been worked on for the last five years and the reports should be out within a year. Certainly information is available on that strip. There is local information available, but not in published form, for the area west of the 5th, south of Calgary and again smaller pieces west of the 5th between Calgary and Edmonton as well. But as mentioned by Dr. Silvers there are large gaps in this information.

MR. DOWLING:

In your opinion is it important that we have a complete soil inventory of the eastern slopes?

DR. PETTAPIECE:

It depends at what level of planning you are involved. At a very broad regional level, competent people could take the information that exists now and extrapolate it and be fairly accurate in their interpretations. There is some information available.

MR. DOWLING:

We've had some suggestion, too, that cattle grazing in the forest reserves might possibly be reduced or even terminated in the future and equal grazing areas would be made available elsewhere on what is now considered to be marginal land with grey wooded soil. Could you possibly outline some of the problems that might be associated with turning forested grey wooded soil into pasture?

DR. PETTAPIECE:

There isn't all that much of a problem involved. Certainly many of these soils are much more suited to grazing than to cultivation of many of the cereals that they are being used for now. In fact, many of the marginal lands are reverting to a cattle type industry. So the problem isn't too great in that respect.



DR. TROST:

The Canadian Land Inventory was used by the Foothills Resource Allocation Task Force in preparing the background information that will be available to us in connection with these hearings. Wasn't a soils inventory done in connection with the Canadian Land Inventory?

DR. PETTAPIECE:

Much of the CLI area was outside the boundaries of the east slopes. In fact, it did not consider that part of the country, particularly not from an agricultural point of view which was the soil survey's responsibility. It's true, many others such as forestry and wildlife use soil survey reports as a base when available and get different interpretations. But no, much of that area was not soil surveyed prior to the preparation of CLI maps.

DR. TROST:

We are given to understand that there is an index of soil types in the Foothills Resource Allocation Study. Are we being misled or am I mistaken?

DR. PETTAPIECE:

No. There is a listing of the kinds of soils that are there. What you don't have, in many cases, is the area distribution of these soils, which is essential. It's like saying there is coal in the foothills, which is true, but you have to know where it is.

DR. TROST:

I understand that this is identified on a fairly small unit basis.

DR. PETTAPIECE:

There are people here who know more about this and who could supply you with more information. But I think, in fact, it's the area outside the forest reserve boundaries for which this information is available. Within the forest reserve boundaries there is no detailed information.

DR. TROST:

Roughly how many types of soils do you feel can be classified in the eastern slopes?

DR. PETTAPIECE:

It depends entirely upon what scale of area you are talking about. If you are talking about the eastern soils in general you may want to talk about four or five. If you talk about a specific area you may want to talk about four or five but they might be a subdivision of one of the other units. So it depends entirely on the scale of consideration.

DR. TROST:

I'm interested in one comment you made which was, in essence, that if a person wanted to use past pedological information he should have a new look at it with a new pedologist. Is the past information kind of punk?

DR. PETTAPIECE:

It was done on a completely different basis. It's true that they didn't have nearly as many roads as they have now. We are saying that the concepts have changed. Our way of looking at soils has changed. The information is there and much of it's valid but there is a danger of a person who is not trained in soils using it incorrectly or out of context. I think this should be avoided while the information is available.

916-1

B R I E F

submitted by

ENVIRONMENTAL PROTECTION STUDY GROUP

of the

Public Advisory Committee on the Environment

STATUTORY PROTECTION OF PARKS, NATURAL AREAS AND  
RECREATIONAL AREAS IN ALBERTA

Presented By

Dr. G.C.D. Griffiths

Presented to

Public Hearings

on

LAND USE AND RESOURCE DEVELOPMENT  
IN THE EASTERN SLOPES OF THE ROCKY MOUNTAINS

STATUTORY PROTECTION OF PARKS, NATURAL AREAS AND RECREATIONAL  
AREAS IN ALBERTA

This paper covers roughly the field described in the Public Land Act (1966) as "public lands set aside". It is our opinion that a multiple-use concept of management is only appropriate for these lands to the extent that other uses may be permitted if they do not significantly conflict with the primary purposes for which the land has been set aside. In some provinces the description "multiple-use parks" or "resource parks" has been used to justify allowing commercial exploitation of park lands. It seems to us that such description is self-contradictory, because recreational and extractive uses of the same land are incompatible.

It seems to us that there are four main kinds of use or purpose for which public lands may be set aside: (1) preservation, (2) research, (3) education, and (4) recreation. A clear statement of use or purpose should be contained in all legislation providing for the setting aside of public lands, so that clear guidance is provided to those who will administer the legislation. The continual battle between "recreationists" and "preservationists" in the National Parks Service is a good example of what happens when civil servants have to administer legislation whose purpose is not stated with sufficient clarity. The phrase "land-use" in this context should be understood in a wide sense, including the preservation of land for posterity as well as short-term uses.

The categories of land considered in this paper do not, of course, cover the whole field of recreational land. In particular, we do not consider campsites administered by the Highway's Department, Forest Service, lumber companies or private individuals. It is desirable that the availability of campsites should continue to be supplemented from these sources. However, in cases where the area surrounding such campsites merits long-term preservation for recreational use, the establishment of new Provincial Parks should be considered. There are many opportunities for setting aside Parks in areas already subject to recreational use in the foothills and other parts of the Green Zone.

## 1. Wilderness Areas

### (i) Purpose

The primary purpose for setting aside wilderness areas should be to preserve extensive areas of natural ecosystems, including the top carnivores. The furtherance of research, education and recreation is a secondary purpose, to be pursued only in such ways as do not conflict with this primary purpose.

### (ii) Human Activities

For the purpose of regulating human activity the establishment of two types of wilderness area is recommended: first, benchmark wilderness in which human activities will be very severely restricted, and second, a category of wilderness in which the traditional human uses of wilderness, notably hunting and fishing, will be allowed to continue under careful control.

In benchmark wilderness the only activities permitted to the public without restriction should be hiking, climbing, trail skiing and nature interpretation. Horse access should be forbidden or strictly controlled by regulations. Organizers of parties should at most be allowed to take in a few horses or mules as pack animals, but not large number of horses merely for riding. In the second category of wilderness non-motorized hunting, trapping and fishing would be permitted in addition to the activities permitted in benchmark wilderness.

Motorized access to all categories of wilderness should be prohibited, both to the public and to the administration. Helicopters should be used for emergency access (such as evacuating people in the event of fire). No buildings should be erected except for a few primitive shelters at campsites. No artificial recreational facilities (e.g. ski tows) should be constructed.

Ecological research of a non-destructive nature may be permitted in wilderness areas, but any buildings or semi-permanent camps needed

by the researchers should be located outside the wilderness area, and they must respect the same restrictions on motorized access as other wilderness users. Long-term research should be undertaken on floral and faunal changes in benchmark wilderness, the second category of wilderness and comparable areas under "multiple-use management" (e.g. land under timber leases), in order that the environmental effects of these different management regimes can be assessed.

Natural fires should be allowed to run their course in wilderness areas, except when they reach catastrophic proportions. In such cases fire-fighting crews and equipment should be taken in by helicopters. Fire access roads should not be maintained. Insect control measures should not be permitted.

### (iii) Legislation

Three areas of benchmark wilderness have recently been established under the Wilderness Areas Act (1971), an act which provides satisfactory legal protection for this kind of wilderness. The only wilderness area where hunting, trapping and fishing are permitted is the Willmore, established under the Willmore Wilderness Park Act (1959, with amendments up to 1965). The latter Act has a serious shortcoming in that mineral exploration and mining are exempted from its control. A recent amendment to the Wilderness Areas Act provides for the establishment of "buffer zones" in which hunting, trapping and fishing would be permitted. However, we do not regard this provision as satisfactory since it provides no restriction on motorized access in buffer zones. Therefore we recommend further revision of the Wilderness Areas Act to replace the "buffer zone" provision with a provision for a second category of wilderness in which controlled hunting, trapping and fishing will be permitted. All other restrictions contained in the Act should apply also to this second category of wilderness. We also recommend replacing in the Act the complete prohibition of the use of horses and pack animals with a provision to make regulations governing their use. If the Wilderness Act is amended in this way it will be possible to

redesignate the Willmore Wilderness under this Act and to repeal the less satisfactory Willmore Wilderness Park Act.

## 2. Ecological Reserves

### (i) Purpose

The primary purpose of setting aside ecological reserves is to preserve in a natural state representative samples of ecosystems, including some containing localized or endangered species, and to facilitate long-term ecological research on these ecosystems. In some cases educational use may be a secondary purpose for establishing a reserve, but this use should not be allowed to conflict with the primary purpose.

### (ii) Human Activities

We envisage ecological reserves as normally being of limited size. Therefore recreational activities should not be promoted within them, since extensive visitation might conflict with their preservation in an unimpaired state. In a few cases a complete ban on recreational visits by the public may be necessary.

Research which does not cause long-lasting impairment should be encouraged in ecological reserves, but buildings or semi-permanent camps used by researchers should be located outside the reserve. Motorized access except by helicopter should be forbidden. Hunting, trapping and fishing should also be forbidden. Some ecological reserves may be opened to educational visits by university and school groups, providing that such groups are properly supervised and the carrying capacity of the land is not exceeded.

### (iii) Legislation

Over 100 ecological reserves for Alberta have been proposed in the context of the IBP-CT (International Biological Programme--Conservation Terrestrial) system. A few of these have been designated as



"natural areas" under the Public Lands Act (1966), but most are at present protected only by administrative reservation. In addition several hundred other parcels of land have been designated as natural areas under this Act. These range from valuable potential ecological reserves to vacant public lands classified as natural areas for no better reason than that they have not been claimed for any other use. Six natural areas have also been designated under the Provincial Parks Act (1964). While supporting these actions of government, we do not think that Orders-in-Council under these Acts provide a sufficient guarantee of preservation of ecological reserves for long-term research. We therefore ask the Government to give serious consideration to the introduction of an Ecological Reserves Act. A copy of an article by Dr. R. T. Franson on British Columbia's Ecological Reserves Act, with the text of the Act, is attached as an appendix to this paper. We support Dr. Franson's comments that the establishment or deletion of reserves should be done by the Legislature, not by Order-in-Council, and that the appointment of an advisory committee would be desirable. The major advantage of an act of this type is that it excludes ecological reserves from dispositions under other acts, thus preventing departments from giving conflicting land-use commitments. Designation as a "natural area" only excludes other dispositions under the Public Lands Act or under the Forests Act, leaving such areas open to resource exploitation. Natural area status therefore does not provide sufficient protection for ecological reserves for long-term research, and we recommend that all "natural areas" warranting such protection should be designated as ecological reserves under the proposed new act. Of course not all of the existing "natural areas" will warrant this increased protection, and a comprehensive review of them will be needed. The "natural areas" designation by Order-in-Council could continue to be used for sites of insufficient importance to be designated as ecological reserves, or as a temporary designation for sites whose potential as ecological reserves is under investigation.

It is arguable that the introduction of an Ecological Reserves Act is not strictly necessary, since such reserves could be designated

wilderness areas under the Wilderness Areas Act. It is true that there is some overlap between the categories of wilderness area and ecological reserve. Some of the "major ecological reserves" in the IBP-CT system (those with area in excess of 100 km<sup>2</sup>) may qualify as wilderness areas. But to attempt to regulate all ecological reserves under the Wilderness Areas Act would inevitably lead to confusion regarding the intent of this Act, since some reserves will be areas of very small size set aside for quite specific research purposes. It would appear preferable to set aside small ecological reserves, together with educational reserves, under a separate Ecological Reserves Act following the British Columbia precedent.

### 3. Educational Reserves

#### (i) Purpose

The primary purpose of setting aside educational reserves is to provide land where schoolchildren and undergraduates can be instructed on and perform studies on the natural environment. Consistent with this primary purpose, management should aim at preserving the native vegetation of these reserves, together with as much of the native fauna as they can support by virtue of their size.

#### (ii) Human Activities

We envisage that educational reserves will be regularly visited by school and university classes. A maximum level of visitation should be set in relation to the carrying capacity of the reserve, and standards of supervision set for junior classes to prevent vandalism. Schools should be held financially responsible for any vandalism occasioned by their failure to supervise classes adequately. Unnecessarily destructive activities such as scavenger hunts and flower picking contests should be discouraged. Interpretive visits for the general public may be organized during school holidays.

(iii) Legislation

At present there is no provincial legislation specifically intended to protect educational reserves in Alberta, although there are of course sites used de facto for this purpose. In view of the widespread demand for increased environmental studies in school curricula, we believe that the Government should investigate the need for a provincial system of educational reserves. The B.C. Ecological Reserves Act includes educational reserves within its scope. If, as we recommend, an act of this kind is introduced in Alberta, educational reserves could be designated under its provisions without the need for separate legislation.

4. Wild Rivers

A detailed proposal for the designation of wild rivers in Alberta was made in 1967 by the Alberta Fish and Game Association (Policy Statement No. 2.4) (attached as Appendix 2). The Government took no action on this at the time. The Association recommended the passing of a Wild Rivers Act, to confer protection to running waters, their beds and shores. The primary purpose of the proposed legislation would be to preserve rivers in their natural state. Recreational activities (including boating and fishing) would be encouraged insofar as they do not conflict with this primary purpose. Since 1967 the assault on our rivers by pollution, damming and diversion schemes has continued. We therefore recommend that the Government review the Association's proposal as a matter of urgency.

5. Recreational Areas (Provincial Parks)(i) Purpose

Since Alberta now has a separate Wilderness Areas Act, we believe that the designation "provincial park" should be applied to land set aside primarily for the purpose of recreation. This is what

the general public understands by the term "provincial park". Areas presently in provincial parks which merit stricter preservation and limitation of recreational use (such as some parts of the Dinosaur and Cypress Hills) would be better transferred to the "wilderness area" or "ecological reserve" category. Research and educational uses of provincial parks are acceptable as secondary uses to the extent that they do not conflict with recreational use. Parks should be zoned into natural recreation areas, where preservation of the natural ecosystem will be ranked as a management purpose of equal importance to the provision of recreation, and developed recreation areas, where artificial recreational facilities detrimental to the natural environment may be provided.

#### (ii) Human Activities

We consider the following to be artificial recreational facilities, to be provided only in restricted areas zoned as developed recreation areas: golf courses, tennis courts, ski lifts, artificial beaches, playing fields and other areas of mowed grass, ornamental gardens, museums and in general all indoor facilities. In natural recreation areas permitted activities should normally include: primitive camping, picnicking, walking, canoeing and other non-motorized boating, nature interpretation, trail skiing and snowshoeing. All-terrain vehicles and snowmobiles should continue to be banned from provincial parks, because they disrupt the enjoyment of the majority of visitors. Road construction in parks should be minimal, and use of all vehicles confined to roads. The parks should not provide facilities for sporting events intended to attract spectators. Accommodation for visitors and park staff should be provided outside park boundaries. Building of summer cottages should no longer be permitted inside parks.

#### (iii) Legislation

Fifty provincial parks have been established in Alberta under the Provincial Parks Act (1964). We recommend that this Act be revised.

It has not given the parks administration complete control over land within parks, since disposition of this land can be made under other legislation. Intrusions conflicting with recreational use (such as mining and oil drilling) have consequently occurred in some parks. If a clause forbidding dispositions of park land under other legislation were introduced (as in the Wilderness Areas Act and the B.C. Ecological Reserves Act), such conflicts could be prevented in the future. We also recommend that the establishment or deletion of parks, or changes in their boundaries, should be made by the Legislature, not by Order-in-Council. This would be achieved if Provincial Parks were defined in schedules to the Provincial Parks Act (as are Wilderness Areas in the Wilderness Areas Act). The practice of removing rights-of-way for proposed highways from parks by Order-in-Council should be discontinued. Road design in parks should be subject to the control of the parks administration, and standards set by regulations under a revised Provincial Parks Act.

#### 6. Special-Purpose Preserved Sites

Under this heading we have in mind particularly archaeological, paleontological, geological and historical sites. The Legislature recently acted upon recommendations of the Environment Conservation Authority in passing a new Act to protect historical and archeological sites. We fully support this legislation, and hope that it will be firmly enforced. Possible recommendations regarding the protection of paleontological and geological sites are now under review by the Non-Renewable Resources Study Group of the Public Advisory Committee.

#### 7. Travel Recreational Routes

Under this heading we have in mind river parks, historic trails and parkways. No provision for establishing such travel routes is made in current Alberta legislation. In 1972 the federal government issued a publication called "Byways and Special

Places", in which a system of historic land and water routes for Canada is proposed. Details of how these proposals may be implemented are still awaited. It does not seem useful for us to comment at this time on possible statutory and administrative measures, before the federal government has completed its studies on these matters. We will therefore content ourselves with expressing support in principle for the proposals in the "Byways and Special Places" paper.

#### 8. Bird Sanctuaries and Wildlife Sanctuaries

Bird sanctuaries and wildlife sanctuaries in Alberta are designated by Regulations 411/70 and 230/72 under the Wildlife Act. In addition, some migratory bird sanctuaries have been designated under federal legislation (The Migratory Bird Sanctuary Regulations under the Migratory Bird Convention Act). These migratory bird sanctuaries are all also declared bird sanctuaries under the provincial regulations.

The Migratory Bird Sanctuary Regulations are enforced (mainly on complaint) by the Canadian Wildlife Service. Their scope is very limited. They contain prohibitions on hunting or otherwise molesting migratory birds, and powers to control dogs and cats. That is all. They are quite inadequate to protect the sanctuaries against habitat destruction, which is much more of a threat to bird populations than the depredations of a few cats. In at least one case, the Gaetz Lake Sanctuary at Red Deer, the title to the land has been vested in a department not primarily concerned with conservation (the provincial Department of Health).

The provincial regulations under the Wildlife Act give the Department of Lands and Forests comprehensive powers to prohibit or control the activities of hunters and trappers in bird and wildlife sanctuaries. Like the federal regulations, however, they are inadequate to protect the sanctuaries against habitat destruction (for instance, through the actions of resource industries); nor do they

contain any restriction on disposal of the title to the land. The land in sanctuaries remains under multiple-use management, and there is no guarantee that the interests of its birds or wildlife will always be given priority.

We are therefore of the opinion that the existing statutory protection given to bird and wildlife sanctuaries in Alberta is inadequate. We recommend that they be given better protection by whatever means is appropriate in each case. Many would merit the status of ecological reserves under our proposed Ecological Reserves Act. (The special case of sanctuaries on land leased to the federal government, such as Wainwright and Suffield, will not be discussed here.)

#### 9. Summary of Recommendations

- (1) That the Wilderness Areas Act be amended to draw a distinction between two categories of wilderness: benchmark wilderness in which human activities will be severely restricted, and a second category of wilderness in which traditional human uses (hunting, trapping and fishing) will be permitted.
- (2) That consideration be given to protecting the Willmore Wilderness under the Wilderness Areas Act, as amended in accordance with Recommendation 1.
- (3) That an Ecological Reserves Act be introduced following the British Columbia precedent, to enable the setting aside of reserves for research and educational purposes.
- (4) That a Wild Rivers Act be introduced.
- (5) That the Provincial Parks Act be amended to forbid dispositions of park land under other legislation, and to require that parks be established by schedules to the Act and that their deletion or changes in their boundaries be made only by amending schedules.



- (6) That bird sanctuaries and wildlife sanctuaries be given better statutory protection, for instance by designating them as ecological reserves under the new Act proposed in Recommendation 3.

# *The British Columbia Ecological Reserves Act— A Model for Canada*

by ROBERT T. FRANSON

FROM "Nature Canada"  
January/March 1972.

Early in 1971, the British Columbia Legislature enacted the *Ecological Reserves Act*, the first Act of its kind in Canada. As the preamble and section 2 of the Act indicate, the purpose of the legislation is to preserve samples of representative and unique natural ecosystems for scientific research and educational purposes. To date, 29 reserves have been created covering a total of more than 33,000 acres.

Few readers of *Nature Canada* will doubt the need for a better understanding of ecology. What may come as a surprise is the fact that there are few places where ecologists can carry on their work uninterrupted. For example, in unprotected wilderness areas, valuable long-term experiments may be lost because of the paramount right of prospectors to take any unclaimed lands. Even in parks, scientists may find it impossible to carry on their work. Certain kinds of studies, vegetative sampling for example, would interfere with the recreational use of the park. And heavy recreational use can destroy fragile ecosystems and disrupt experiments. As Darling and Eichhorn have observed: "Even the purest of nature lovers has physical weight and boots on his feet."

---

*Mr. Franson is an Assistant Professor at the Faculty of Law, University of British Columbia. He is a member of a research team that has been established at the U.B.C. Faculty of Law for the purpose of studying ecological reserves legislation. The work is being done under a grant from the Canada Council.*

---

Thus, the *Ecological Reserves Act* fills an important gap in the law by providing protection for the scientific study of the environment. It should not be thought, however, that all non-scientific uses are ruled out. Other uses, particularly educational use, can and should be provided for whenever the ecosystem being preserved is capable of withstanding the pressures that will be generated.

In addition to the preamble and statement of purposes mentioned above, the Act contains the following important provisions. Section 3 provides for the creation of reserves by order of the Cabinet. It is important to note that reserves may only be created from public land; however, if the government wants to protect some ecosystem located on

private land it has ample powers to purchase the land through condemnation proceedings. Section 4 provides for the deletion of any portion of a reserve, also by order of the Cabinet. Sections 5 and 10 make it clear that reserves are protected from activities sanctioned under other legislation such as mining and logging.

Once the reserves are created, they must be managed. At first it might seem that nature could be allowed to take its uninterrupted course on each of the reserves, but this is simply not the case. In the first place, different experimental or educational uses might interfere with each other or damage the reserve. In addition, it may sometimes be necessary to simulate natural forces that no longer exist because of policies pursued outside the reserve. For example, natural fires once swept the grasslands keeping them clear of invading shrubs. But they are no longer allowed to occur. Consequently, to maintain a grassland ecological reserve it may be necessary to burn it occasionally.

Of course, each reserve will have different characteristics. It is envisioned that a management plan will be developed for each one, and that this plan will guide the officials responsible for managing the reserves. Section 7 gives the Cabinet broad powers to make regulations for the management of reserves.

One of the most important provisions is section 9, which allows the Minister to appoint an advisory committee. The function of the advisory committee is to provide the technical information necessary for selection and management of reserves. Ideally it should include representation of those most interested in the reserves programme—ecologists and educators. Such a committee has been appointed in British Columbia.

On the whole, the *Ecological Reserves Act* is excellent legislation of which the Government of British Columbia can be justly proud. However, there are some deficiencies.

As the Act currently stands, portions of reserves or entire reserves may be deleted as easily as they are created, by order of the Cabinet. Of course, the government must have the power to delete reserves. Events, like forest fires, can occur that destroy the usefulness of a site as an ecological

reserve. What is distressing is that there is no guarantee that an adequate case will be made for the retention of a reserve before it is deleted.

As originally conceived by the supporters of ecological reserves legislation, the advisory committee was to stand as a bulwark against unwarranted removal of a reserve in response to political pressures exerted by other interests. To assure that this mechanism works ecological reserves legislation should: (1) require the minister to appoint an advisory committee, a majority of whose members should be drawn from outside the public service; (2) give the advisory committee the power to hold public hearings and provide a budget for that purpose; and (3) provide that portions of reserves may be deleted only after the advisory committee has been afforded the opportunity of reporting to the Cabinet on the proposed deletions. With these changes, the *Ecological Reserves Act* of British Columbia would be an excellent model for the other provinces to copy.

## Ecological Reserves Act, 1971

### PREAMBLE

WHEREAS the Province of British Columbia is favoured with a wide variation of climate and topography resulting in a multiplicity of biogeoclimatic zones:

And whereas it is considered highly desirable in the public interest to set aside and reserve areas of Crown land representative of distinctive ecosystems for present and future scientific study:

And whereas it is the intention of this Legislature that one hundred such areas be selected and reserved for this purpose by the end of the year 1975:

Now, therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of British Columbia, enacts as follows:—

### INTERPRETATION

1. In this Act, unless the context otherwise requires,
  - (a) "disposition" means and includes every act of the Crown whereby Crown land, mines, minerals, coal, petroleum, natural gas, timber, and water, or any right, title, interest, or estate therein are granted, disposed of, or affected, or by which the Crown divests itself of, or creates a right, title, interest, or estate in, or permits the use of land, mines, minerals, coal, petroleum, natural gas, timber, and water;
  - (b) "ecology" means the study of the interrelations between man, or other animals, or plants, and their environment, and "ecological" has a similar meaning;
  - (c) "ecosystem" means a complete system composed of man, other animals, and plants in a defined area, together with the soil and climate comprising their habitat in that area;
  - (d) "environment" means all the external conditions or influences under which man, animals, and plants live or are developed;

- (e) "habitat" means that kind of place or situation in which a man, animal, or a plant lives; and
- (f) "minister" means the Minister of Lands, Forests, and Water Resources.

### PURPOSE

2. The purpose of this Act is to reserve Crown land for ecological purposes, including

- (a) areas suitable for scientific research and educational purposes associated with studies in productivity and other aspects of the natural environment;
- (b) areas that are representative examples of natural ecosystems within the Province;
- (c) areas that serve as examples of ecosystems that have been modified by man and that offer an opportunity to study the recovery of the natural ecosystem from such modification;
- (d) areas in which rare or endangered native plants and animals in their natural habitat may be preserved; and
- (e) areas that contain unique and rare examples of botanical, zoological, or geological phenomena.

### LIEUTENANT-GOVERNOR TO ESTABLISH RESERVES

3. The Lieutenant-Governor in Council may, by notice signed by the minister and published in the Gazette, establish ecological reserves of Crown land.

### LIEUTENANT-GOVERNOR TO CANCEL OR AMEND RESERVES

4. The Lieutenant-Governor in Council may, by notice signed by the minister and published in the Gazette, add to, or cancel in its entirety, or delete any portion of an ecological reserve established under section 3.

### ECOLOGICAL RESERVES NOT AVAILABLE FOR DISPOSITION UNDER ANY OTHER ACTS

5. On the coming into force of this Act, any area thereafter established as an ecological reserve under this Act shall be immediately withdrawn and reserved from any further disposition that might otherwise be granted under the provisions of any Act or law in force in the Province, including, without limiting the generality of the foregoing, dispositions under the *Land Act*, *Forest Act*, *Grazing Act*, *Water Act*, *Mineral Act*, *Placer-mining Act*, *Coal Act*, *Petroleum and Natural Gas Act*, 1965, *Water Resources Act*, or *Mines Rights-of-way Act*.

### NATURE CONSERVANCY AS ECOLOGICAL RESERVE

6. A nature conservancy, or any portion thereof, now or hereafter designated as such under the *Park Act* may, notwithstanding that Act, be established as an ecological reserve under this Act.

### REGULATIONS

7. For the purpose of carrying out the provisions of this Act according to their intent, the Lieutenant-Governor in Council may make such regulations and orders as are ancillary thereto and not inconsistent therewith and as are considered necessary or advisable; and every regulation or order made under this section shall be deemed part of the

Act and has the force of law; and, without limiting the generality of the foregoing, may make regulations

- (a) respecting the control, restriction, or prohibition of any kind of use, development, or occupation of the land or of any of the natural resources in an ecological reserve;
- (b) respecting the control, restriction, or prohibition of the exercise of any power granted by any other Act or regulation by a minister, department of the Government, or agent of the Crown specified in the regulations;
- (c) respecting the control, restriction, or prohibition of the dumping, deposit, or emission within an ecological reserve of any substance; and
- (d) respecting, generally, any other matter or thing necessary or incidental to the protection of an ecological reserve.

#### ADMINISTRATION

8. Land established as an ecological reserve under this Act shall, subject to the regulations and orders made under this Act, be under the jurisdiction of and shall be administered by the minister.

#### ADVISERS

9. The minister may appoint a person or persons to advise him respecting any matter relating to the establishment and administration of ecological reserves, and a person appointed under this section shall have the duties prescribed by the minister and shall be subject to the regulations made under this Act.

#### OTHER ACTS

10. This Act, and any regulation or order made under this Act, applies to every ecological reserve, notwithstanding any other Act or regulation.

*Editor's Note:* A booklet entitled *Ecological Reserves in British Columbia* may be obtained by writing to the Department of Lands and Forests, Legislative Buildings, Victoria, B.C. This booklet shows how Canada's participation in the International Biological Program (IBP), created a basis for the enactment of this legislation.

APPENDIX 2

## ALBERTA FISH AND GAME ASSOCIATION

## POLICY STATEMENT 2.4

WILD RIVERS

The Alberta Fish and Game Association believes that at present the recreational use of Alberta's running water - our rivers and streams - is now at least as important as the agricultural, domestic and industrial uses to which it is now being put and that in future the value for recreational use of free running water will probably exceed its value for these other purposes. Therefore, this Association is committed to the policy that it is essential that as much consideration be given now in Alberta's water resource planning process to preserving some free flowing rivers, streams, and portions thereof as is now being given to the damming and diverting of our rivers and streams for the purpose of agricultural, domestic and industrial use.

Prior to 1967, concern grew in this Association that the many dams and water diversions being planned in Alberta could eventually have the effect of seriously depleting the free-running waters themselves and the public funds of assets that are often found in combination with free running water.

The object of the concern was to find some way of attaining three objects:

1. Indicating to the Alberta Government that a significant group of Albertans regard free running rivers and streams as priceless assets;
2. Advising the Alberta Government as to which rivers, streams, and portions thereof are considered by Albertans from all parts of the Province most worth preserving in their natural state;
3. Suggesting a method by which streams, rivers and portions thereof can be protected and preserved in their natural state for the use of the future and present generations.

At the 1967 Convention of this Association in Edmonton, a way of attaining at least objectives 1 and 3 suddenly appeared in the form of the following resolution:

"Be it resolved that this Association requests the Alberta Government to embark on a Wild Rivers project whereby certain Alberta rivers and streams and portions of Alberta rivers and streams are reserved and set aside to remain in perpetuity in their natural state, untouched by the projects of Government, Power Companies, Industry in general or by private individuals."

Seldom has a resolution so taken the imagination of our Association, and it was passed unanimously. Little indication was received officially, however, as to whether or not a Wild Rivers Act was regarded favourably by the Government, so the same resolution was again passed unanimously at the 1968 Convention of the Association in Lethbridge with the added recommendation that active steps be taken by our Association to secure passage of a Wild Rivers Act.

Endorsation of our Wild Rivers resolution late in June of last year by the Western Canada Conservation and Reclamation Association, indicates the idea appeals to at least one other large group whose emphasis on water conservation differs somewhat from that of our Association.

The Alberta Fish and Game Association Wild Rivers Committee has now, as a result of consultation with people throughout the Province, produced the list, marked Schedule "A" to this Policy Statement of thirty-eight Alberta rivers, streams, and portions thereof that should be included in a Wild Rivers Act. In addition, the recommendation of the Committee and of this Association is that the list of Wild Rivers should never be closed, and that studies should be carried out constantly to ascertain what other Alberta rivers, streams, and portions thereof should receive the protection of designation as a Wild River.

Many of the initial choices on Schedule "A" are attempts to preserve unique values: Greyburn and Battle Creeks to preserve the furthest east trout streams in Alberta; the portions of the Oldman and Castle Rivers to preserve one of Alberta's last native cutthroat populations; Ghostpine Creek to preserve the unique scenery and fossil beds to be found along it; Shunda Creek to preserve an as yet unspoiled example of the muskeg creeks indigenous to Central Alberta, this one also providing as choice fly fishing as is available in North America; two separate sections of the Red Deer River, a bad lands section for the beauty of its scenery; the section upstream from Sundre to preserve what experts regard as the most challenging piece of canoe water in Canada. All choices protect magnificent scenic and recreational values.

The need for the protection of Wild Rivers is currently being recognized in other jurisdictions. The Wild and Scenic Rivers Act has at last become law in the United States. Montana has enacted provisions to protect rivers and streams and Ontario is moving toward giving provincial park status to certain running bodies of water in that province. Surely with a Government now committed in the White Paper to a course of development of all our resources to derive the maximum human values therefrom, the time is now advantageous for the Alberta Government to confer protection of law on certain Alberta Rivers, streams and portions thereof to preserve the recreational and scenic assets of the waters and their immediate surroundings for the people of this province now and in the future.



After an extensive study of Wild River Bills from other jurisdictions our Association suggests that protection of the rivers, streams and portions thereof set out in Schedule "A" be effected by conferring on them, by a Wild Rivers Act, status akin to that conferred on certain lands by the Provincial Parks Act.

Protection to running waters, their beds and shores can be conferred here more easily and inexpensively than in many other jurisdictions because in Alberta the beds and shores are owned by the Crown. For ideal protection of a river or stream, some concept would have to be set out in the Act as to the number of areas of bank per mile of stream that would also be included in the protected area. For example, the new American Wild Rivers Bill provides that no more than an average of 320 acres per mile on both sides of the river or stream would be required for the protection of the stream. Again, many of the waters set out in Schedule "A" flow entirely through Crown Land so there would be little trouble and expense involved in acquisition of the immediate surroundings.

The Act would, of course, have to contain many prohibitions against damming, diverting, polluting or otherwise fouling the waters of a Wild River and against doing anything on the banks such as logging and grazing which would be injurious to the Wild River or its watershed. The Public Lands Act, 1966 and the Water Resources Act provide precedents for legislation protecting waters and watersheds.

Finally, this Association urges that when a Wild Rivers Act becomes fact and becomes law it should provide that when a Wild River is designated, jurisdiction over the waters in it be passed from the Minister of Agriculture to the Minister of Lands and Forests to go with the jurisdiction over the bed and the bank that the Minister of Lands and Forests already has under the Public Lands Act, 1966.

The urgency is particularly great in this matter at a time in Alberta's development when extensive plans are being made for the damming and diverting of many of our provincial rivers and streams. Unless provision is made now for the protection of the truly valuable public assets among our rivers and streams and their immediate surroundings, great recreational opportunities and scenic values may be lost to present and future Albertans.

Accordingly, it is the policy of this Association to urge that the Government immediately commence a study of the recommendations and proposals in this Policy Statement with a view, within 6 months, to advising the Association on the feasibility of introducing a Wild Rivers Bill into the 1970 session examination of the suitability of the rivers, streams and portions thereof set out in Schedule "A" hereof for inclusion into the Wild Rivers Act.



The Policy of this association further is to offer and give the relevant departments of government such assistance as we are capable of to ensure that a Wild Rivers Bill be introduced as a Government Bill in the next session of the legislature. In this regard, the Association requests an early meeting with representatives of the Fish and Wildlife Division and the Water Resources Branch to discuss this policy statement in light of present water-use plans of the Government.

For further clarification as to our determination in this matter, the policy of this Association is that, failing Government action and assistance, we shall continue our efforts unilaterally to ensure introduction of a Wild Rivers Bill in any event, as a Government Bill or otherwise, into the next session of the legislature.

Finally, it is our hope, and we would urge, that any Wild Rivers Act would contain a statement of purpose similar to that admirable statement set out as Section 4 of Alberta's Willmore Wilderness Park Act which, when paraphrased and mixed slightly with the very similar Section 4 of the National Parks Act could produce the following for an Alberta Wild Rivers Act:

"The Wild Rivers are dedicated to the use of the people of Alberta, for their benefit, education and enjoyment, subject to this Act and the Regulations, and shall, by the management, conservation and protection of their beds, banks, and waters, and by the preservation of their natural beauties, be maintained and be made use of so as to leave them unimpaired for the enjoyment of future generation."

which statement, when and if the Government enacts it, accurately states the present general policy of this Association on Wild Rivers.

## SCHEDULE A

- 2.4.1 Battle Creek. (49' 38" 110' 00") Within Cypress Hills Park, Watershed.
- 2.4.2 Greyburn Creek. (Flows NE into Battle Creek, 14-8-1-W4 49' 38" 110' 01") Within Cypress Hills Park, Watershed.
- 2.4.3 Milk River. (1-1-5-W4 49' 00" 110' 33") From West boundary of Writing in Stone Park to the U.S. Border, Crown land on either side. Most important part is from Range 9 W4 to the U.S. Border.
- 2.4.4 Castle River. (Flows NE into Oldman River 27-7-30 W4 49' 36" 113' 59") Watershed upstream from the Carbondale River, including all tributaries.
- 2.4.5 Oldman River. (27-11-13-W4 49' 57" 111' 42") Upstream from the Forest Boundary including all tributaries and full watershed.
- 2.4.6 Highwood River. (Flows NE into Bow River 26-21-28-W4 50' 49" 113' 47") Upstream from Forest Reserve boundary including all tributaries and full watershed areas.
- 2.4.7 South Saskatchewan River. (50' 53" 110' 00") From south east corner of British Block downstream to Saskatchewan border on east bank area, not in the restricted area.
- 2.4.8 Ghostpine Creek. (Flows SE into Red Deer River. 34-29-21-W4 51' 32" 112' 54") From the Red Deer River upstream for the section which is in the Badlands area as far north as the road east from Morrin.
- 2.4.9 Cottonwood Creek. (Flows S into Galwey Creek, 2-29-W4 49' 08" 113' 51") Below reservoir for approximately 3 or 4 miles.
- 2.4.10 Clearwater River. (16-39-7-W5 52' 22" 114' 57") From park boundary to forest reserve boundary.
- 2.4.11 South Ram and watershed. (Flows NE into Saskatchewan River 39-10-W5 52' 23" 115' 25").
- 2.4.12 Panther and Red Deer Rivers. (Panther flow NE into Red Deer 31-10-W5 51' 39" 115' 19", Red Deer 50' 58" 110' 00") from National Park boundary to the edge of the forest reserve.
- 2.4.13 Blackstone River. (Blackstone River flows NE into Brazeau 52' 50" 116' 07") and tributaries including the Wapiabi Creek (flows NE into Blackstone 42-17-W5 52' 37" 116' 20") and Cardinal Creek (flows E into Brazeau 52' 52" 117' 18").

- 2.4.14 Shunda Creek (flows E into N Saskatchewan 40-13-W5 52' 28" 115' 47").
- 2.4.15 Battle River areas (49' 38" 110' 00") from Hardisty to the Saskatchewan Border.
- 2.4.16 Red Deer River (50' 58" 110' 00") in the vicinity of the Badlands Park, comprising areas both up and downstream from the park.
- 2.4.17 Elbow River (14-24-1-W5 51' 03" 114' 02") flows east into Bow River.
- 2.4.18 Sheep River (32-20-28-W4 50' 44" 113' 51") flows east into Highwood River.
- 2.4.19 Dutch Creek (11-3-W5 49' 54" 114' 23") flows east into Oldman River.
- 2.4.20 Cataract Creek (16-5-W5 50' 24" 114' 35") flows north into Highwood River.
- 2.4.21 Tay River (35-8-W5 52' 03" 115' 05') flows east into Clearwater River.
- 2.4.22 Raven River (28-35-3-W5 52' 02" 114' 22") flows SE into Red Deer River.
- 2.4.23 House River (56' 12" 112' 30") flows NW into Athabasca River.
- 2.4.24 Clearwater River (56' 44" 111' 23") flows east into Athabasca.
- 2.4.25 La Biche River (31-69-18-W4 55' 01" 112' 44") flows west into Athabasca River.
- 2.4.26 Sand River (19-62-7-W4 54' 23" 111' 02") flows south into Beaver River.
- 2.4.27 Brazeau (45-9-W5 52' 56" 115' 12") flows east into North Saskatchewan.
- 2.4.28 Wolf Creek (54-16-W5 53' 38" 116' 17") flows north into McLeod River.
- 2.4.29 McLeod River (59-12-W5 54' 09" 115' 42") flows north east into Athabasca.
- 2.4.30 Bow River (22-11-13-W4 49' 51" 111' 41") flows east into Oldman River.

- 2.4.31 Stauffer Creek (16-34-4-W5 52' 05" 114' 30") flows SE into Raven River.
- 2.4.32 Smokey (18-83-21-W5 56' 11" 117' 19") flows north into Peace River.
- 2.4.33 Wapiti (7-71-2-W6 55' 08" 118' 18") flows north east into Smokey River.
- 2.4.34 Whitemud (36-51-25-W4 53' 27" 113' 33") flows north into Black mud creek.
- 2.4.35 Chinchaga (58' 53" 118' 20") flows north into the Hay River.
- 2.4.36 Wabasca (58' 22" 115' 20") flows north into Peace River.
- 2.4.37 Berland (58-25-W5) - (tributary of the Athabasca).
- 2.4.38 Simonette - (tributary of the Smokey) - (68-26-W5).

## QUESTIONING BY THE AUTHORITY

DR. TROST:

How are you defining natural areas as against other areas like parks, wilderness areas, recreation areas, ecological reserves and so on?

DR. GRIFFITHS:

I would view the existing natural area designation as something that could be retained as a provisional designation but not as part of an ultimately desirable system of reserves. What I would like to see are firmly protected ecological reserves in place of existing natural areas. Whether or not you would still want to retain the power to designate natural areas as some kind of less-protected area I do not have a strong view on. It might have some advantage as a temporary designation.

DR. TROST:

Do you call a natural area one that is a wilderness area?

DR. GRIFFITHS:

No. The natural area is a designation under The Public Lands Act at present. These are mostly groups of quarter sections in the settled parts of the province. In effect they are protected from agriculture but not from the actions of resource industries. This casts some doubt on the value of the designation.

DR. TROST:

You are using natural areas as defined by The Public Lands Act. Is that the common usage of it? Is that phrase used with other meanings in other parts of the country?

DR. GRIFFITHS:

The phrase in small letters can have a very wide use. The sense in which it is used in this paper is that of the legal definition in The Public Lands Act.

DR. TROST:

In respect to the ecological reserves have you or your committee specific areas in mind?

DR. GRIFFITHS:

We are not going to put in a list of areas. There are over a hundred areas which have been proposed as ecological reserves in the context of the International Biological Program. I understand that a few of these have been given protection as natural areas under The Public Lands Act, for what that is worth. Some are protected only by administrative reservation at the moment. If interest in this project lapses that protection will lapse in a year or two. They are not under any long-term protection at the moment.

DR. TROST:

Is that list, both of areas declared natural areas and those indicated as possible ecological reserves for the International Biological Program, appended to the material you have?

DR. GRIFFITHS:

No. This information is readily available. We were supplied by the Department of Lands and Forests with a list of the natural areas, most of which were established in 1971. There are also six areas designated as natural areas under The Provincial Parks Act. A list of the IBP ecological reserves is obtainable from the coordinator, Dr. I. C. M. Place.

918-1

B R I E F

prepared by

EDMONTON CHAPTER

of

THE NATIONAL AND PROVINCIAL PARKS ASSOCIATION OF CANADA

presented to

PUBLIC HEARINGS

on

LAND USE AND RESOURCE DEVELOPMENT

IN THE EASTERN SLOPES OF THE ROCKY MOUNTAINS

Edmonton, 5th July, 1973

Presented By: Dr. G.C.D. Griffiths



GENERAL SECTION1. GENERAL MANAGEMENT STRATEGY.

In Chapter 5 of the discussion paper "The Resources of the Foothills: A Choice of Land-use Alternatives" five possible management strategies are presented. Strategies A and B would prohibit use of non-renewable and renewable resources of the foothills. Since a large proportion of the area is already subject to long-term commitments on resource use, it is presumably unrealistic to ask the Government to apply either of these strategies to the Foothills as a whole.

The realistic choice is between Management Strategies C, D and E. We regard strategy C as the preferable of these alternatives. It is important for the maintainance of recreational and watershed quality in the Foothills that the Government should be able to plan for the area as a whole, and not abdicate responsibility for lands where private interests have been allowed. In general we would urge the Government not to grant freehold titles in the foothills, but to control all developments which may be permitted under the terms of leases which will automatically revert to the Province upon expiry.

2. WILDERNESS AND WATERSHED PROTECTION.

The paramount importance of watershed protection in the Eastern Slopes and Foothills was recognized in the recently expired 1947 agreement between the Provincial and Federal Governments, where it was stated that "the conservation of the forests on the east slope of the Rocky Mountains and the protection of the watersheds of the rivers therein are matters of great importance to Canada as a whole and especially so to the provinces of Alberta, Saskatchewan and Manitoba".

The aim of conserving forests and watershed quality should continue to take precedence over resource exploitation throughout the Eastern Slopes and Foothills.

The Eastern Slopes and Foothills contain some outstanding areas for wilderness recreation, which mainly coincide with areas of high watershed importance. Lest it be thought that wilderness recreation is the privilege of a few, we now quote statistics on Climbing and Overnight Hiking Registrations in Jasper National Park:

<u>Year</u>	<u>Registrations</u>	<u>Men-Nights</u>
1963	2091	701
1964	1135	162
1965	2193	893
1966	2123	483
1967	2737	650
1968	4178	1646
1969	5711	4362
1970	8113	9059
1971	10872	13400
Increase		
1963-1971:	419 %	1812 %

Source: Visitor use statistics. Jasper National Park. 1972.

Four Wilderness Areas have already been designated in the Foothills (the Willmore, White Goat, Siffleur and Ghost). There is a long-standing proposal for a Wilderness Area around Kakwa Falls, prepared originally by the Wild Kakwa Society and supported by other organizations including ourselves. In recent months the Alberta Wilderness Association has prepared proposals for ten further areas, and we understand that details of these are being presented in their brief to these Hearings. We fully support the proposals of the Alberta Wilderness Association and urge the Government to give favourable consideration to protecting all these areas under the Wilderness Areas Act. This statutory protection would bring important benefits in watershed conservation, as well as in protecting recreational and wildlife resources.

A threat to wilderness and watershed protection is posed by the presence of extensive coal deposits along the Eastern Slopes, largely under areas of high watershed importance (see maps 4 and 5 in the discussion paper "The Resources of the Foothills: A Choice of Land-use Alternatives").

In the present scramble for new conventional sources of energy, it is likely that the Government will be pressured to allow an increased rate of coal extraction, which would lead to degradation of the watershed through siltation and toxic runoff, loss of recreational value, fish and wildlife habitat, etc. In our opinion the Government should not allow any increase in the rate of coal extraction in the Eastern Slopes, both on environmental grounds and because the economic benefits of exporting coal to fuel the industries of foreign countries, who then export their finished goods to Canada, are in any case seriously questionable.

Major pollution problems would inevitably accompany any large extension of coal mining operations in the Eastern Slopes, however sincere may be the Government's intentions to the contrary. There are certain areas of high relief in which watershed protection and coal mining are entirely incompatible. The Government should acknowledge that the coal in such areas should never be mined.

Some rivers in the Foothills contain sites suitable for further hydro developments. Demands to increase the use of this area for that purpose will raise serious conflicts of land use. Many of the rivers in the Foothills provide good sports fishing, which attracts both Alberta residents and tourists. The river valleys are mostly of high recreational value and are key areas for winter survival of many big game animals. Further flooding of valley-bottom land will undoubtedly reduce the capacity of the land for supporting these animals.

We therefore regard it as of the highest importance that all dam-building or diversion proposals in the Foothills should be submitted to public hearings at an early stage, with reasonable notice and advertisement given, before any decision is reached. We would further urge the Government to re-examine the proposal for designating Wild Rivers in Alberta (Alberta Fish & Game Association, Policy Statement no. 2.4), which would preclude the consideration of damming or diversion projects for the stretches of river so protected. Statutory protection of wild rivers at this time would help safeguard Alberta's fish and wildlife populations for the future.

### 3. RECREATIONAL AND TOURIST DEVELOPMENTS.

There is a need for new recreational developments and tourist facilities in the Foothills, and it is particularly desirable that these should be of a kind likely to ease the overuse of facilities in Jasper and Banff National Parks. Additional camp sites, both serviced and primitive, are needed on roads leading to these Parks. A few new motel and cabin developments would also help ease the strain on the National Parks.

We are concerned that certain of the major development proposals submitted do not seem intended primarily to cater for the great numbers of middle-income families who take to the road in summer, but are aimed rather at attracting high-income clientele. Such proposals are particularly objectionable when, as in the case of the

proposal by Convex Associates, they are accompanied by demands for the construction of new airports and high speed roads. The impairment involved in approving such proposals would thus go far beyond the land on which the proposed developments would be situated.

In presenting commercial proposals for tourism and recreation in the Foothills before these hearings, prospective developers have chosen their own sites. In our opinion it is the responsibility of the Government to determine the optimal location for developments, so that facilities for visitors can be provided with a minimum of impairment to the natural beauty of the area. We do not want to see an ugly ribbon development of motels, gas stations, billboards etc. along the major roads and the access roads to Parks, as has occurred in many parts of the United States.

The planning of all visitor facilities should be coordinated by the Government in order to ensure that most are concentrated at a limited number of visitor services centres. Facilities for advertisement should be provided at these centres, and all billboards forbidden.

Only primitive campsites should be provided in locations remote from the visitor services centres. The autonomy granted to local communities under the Municipalities Act might, if not restricted, prevent the Government from exercising control over the further development of these centres after their establishment. To overcome this difficulty, the power of designating Restricted Development Areas under Section 15 of the Department of the Environment Act (1971) should be widely used throughout the Foothills. Indeed it is arguable that most of the Foothills should be designated as one large Restricted Development Area. It is particularly important that this power be used to prevent inappropriate developments in the vicinity of Parks and Wilderness Areas, and generally in areas of high recreational value.

We welcome the recent announcement by the Honourable Allan Warrack, Minister of Lands and Forests, that he intends to expand and upgrade the Provincial Parks system. The development of new Parks accessible from the Forestry Trunk Road and from the approach roads to Banff and Jasper National Parks could do much to alleviate overcrowding there. There are particularly attractive areas for Park development in the Clearwater Forest, including the Ram River Falls area.

In general we advise that the construction of buildings, campsites and parking areas in new Parks be confined, wherever possible, to ground under spruce or pine forest (the dominant vegetation of the area) and that the valley bottoms and immediate vicinity of lakeshores be left in a natural state. Such a policy would ensure preservation of winter range for ungulates, the main limiting factor on their populations, as well as minimizing the visual impact of these developments.

In planning new Parks, both local needs (for day-use only) as well as the needs of overnight visitors should be taken into account. The carrying capacity of Parks should be determined and visitation controlled in Parks that are in danger of damage through overuse. Indoor accommodations, such as motels, should not be built in Parks. Buffer zones should be established around Parks to prevent inappropriate developments. The use of public transport to bring visitors to Parks should be encouraged wherever possible.

In planning campgrounds, both inside and outside Parks, efforts should be made to separate facilities for tents and trailers. Most existing campgrounds in Alberta are inadequate in this respect. Facilities for cyclists should also be planned, as we may expect cycle touring to grow in popularity among young people as gas prices increase. Private campgrounds should be regularly inspected to ensure maintenance of adequate standards of service and hygiene.

We are puzzled by the several proposals for constructing major new ski resorts. Our understanding is that for an intensively used downhill ski area a depth of 100 inches of packed snow is desirable. There are very few locations in the Eastern Slopes which regularly receive this much snow. There has been an unhappy history of construction of ski resorts in Alberta at locations where the snowfall subsequently proves unreliable (for instance, the Whistlers' resort in Jasper National Park and Snowridge in the Kananaskis Valley). We hope that such mistakes will not be repeated. There is no point in scarring our beautiful mountain scenery with lifts etc. for new ski resorts which will go bankrupt after a few years. It is remarkable that some of the proposals for ski resorts indicate that the sponsors have not studied precipitation records relevant to their site. We therefore urge the Government not to approve the construction of new ski resorts without expert advice on precipitation data. In cases where data relevant to

a proposed site are not available, decision should be postponed for several years while such data are collected. It should be appreciated that extrapolation of weather records in mountainous areas is of low reliability, and that therefore only records of precipitation at or very close to a proposed site should normally be considered.

Several proposals for new trail-riding operations have been submitted. We do not attempt to comment on those individually. In some areas these operations may give rise to problems such as trail damage and competition for feed between horses and native ungulates. We suggest that the Government draw up general guidelines for considering trail-riding proposals and set standards for the design, construction and maintenance of trails based on the required carrying capacity. Horse trails should be separated from foot trails wherever possible.

#### 4. FORESTRY

It is likely that demand for Canadian woodpulp products and logs will increase in the future. Therefore, there is likely to be pressure for new forestry enterprises in the Foothills, and conflicts with recreational use and wilderness preservation may arise. In order to minimize such conflicts, it is desirable that the Government set standards for the utilization of logs by pulp mills, to force operators to use smaller-diameter logs which they now leave on the ground. By this means higher pulp production per unit of forest land could be achieved, at the cost of some increase in the price of the product. We believe it preferable in the long term to enforce more intensive utilization of logs by pulp companies rather than allow them to spread their operations over increasing areas of land to the detriment of aesthetic and wilderness values.

Current systems of timber harvesting result in an excessive proliferation of earth roads. In addition to being a wasteful use of land, the presence of these roads makes it difficult to control motorized hunting and creates erosion problems in some circumstances. We recommend that the Government discuss with the industry ways of modifying harvest systems to minimize the provision of access roads and to allow for scarification and replanting of many such roads after use.



## 5. EXPLORATION.

We are concerned about the damage caused to recreational areas in the Foothills by coal exploration crews, both by exploration techniques (such as trenching) and by construction of temporary access roads. We urge as a general policy that the Government require the use of helicopters for taking equipment into areas where access roads are not already available, particularly in areas of high recreational potential. A policy of reusing seismic lines should be enforced throughout the Foothills. Cases have been brought to our notice where new seismic lines have been cut within yards of existing lines. This makes little sense from the point of view of aesthetics and forest conservation. Access roads and trenches made by exploration crews should be rehabilitated, and the cost borne by the exploration company.

## 6. HIGHWAY CONSTRUCTION.

Many of our members have been active in opposing the upgrading of the Kananaskis road, which was undertaken by the Government without input from the public. In the light of this affair, it is a pity that the Department of Highways has not made any presentation to these hearings on possible upgrading of other parts of the Forestry Trunk Road. Paving of the existing road is clearly desirable, but we would oppose any substantial upgrading. In view of the widespread public interest in the Kananaskis Road controversy, we recommend that in future public hearings be held on any proposals for new roads or upgrading of existing roads in the Foothills. Paving of existing roads should take precedence over new road construction or upgrading.

## 7. OFF-HIGHWAY VEHICLES.

Control over the use of off-highway vehicles, such as snowmobiles, trail bikes and all-terrain vehicles, should be exercised throughout the Foothills. We recommend that the use of these vehicles for recreational purposes be permitted only in specially designated areas. We strongly support the prohibition on the use of these vehicles in Parks and Wilderness Areas.



## SPECIAL SECTION

In this section we discuss the commercial proposals for tourism and recreation in the three northern river basins. In most cases we comment only on the major proposals, as we do not have the resources to investigate all the minor proposals.

### 1. THE SMOKY RIVER BASIN

In our view the first priority for recreation in this river basin is a decision on the longstanding proposal for a Kakwa Wilderness Area. We disapprove of the Government's continued indecision on this proposal, while at the same time coal exploration is allowed to continue.

We are not opposed in principle to a Wilderness Recreation Development on the Torrens River, but a decision on the site of such a development should not be made until the boundaries of the Kakwa Wilderness Area have been determined. The facilities provided might include a supervised car park, where wilderness users can leave their cars for extended periods, a small shop and restaurant, showers, cabins and hostel. The proposal as presented seems to us to be overambitious, because a lodge and downhill ski developments are envisaged. While the proposers have taken pains to justify these developments in terms of market demand, they present no climatic data to support their assumption that a downhill ski development would be viable. The viability of the lodge presumably depends on its year-round use (by skiers in winter). In these circumstances we recommend that only a modest development should be approved initially, and that decision on a possible ski lodge and facilities be deferred for some years pending gathering of snowfall data. The precise site for the development should be decided in the light of the boundaries of the proposed Kakwa Wilderness Area. We also suggest that buildings and parking areas should be sited on higher ground than indicated in the proposal, to avoid destruction of winter range for ungulates and risk of flood damage.

We do not oppose the proposal for a Ski resort close to Grande Cache, if snowfall records suggest that this would be viable. In selecting a site, efforts should be made not to damage important wildlife habitat.

We support the proposal for a Youth Hostel in Grande Cache.

## 2. THE ATHABASCA RIVER BASIN.

We have no objections to major proposals nos. 1, 3 and 4 (Silver Summit Alpine Village, Sundance Recreational Vehicle Park and Cadomin Youth Hostel).

The proposed Folding Mountain Recreation Area is in conflict with the Alberta Wilderness Association's proposal for Folding Mountain to be protected as a Wilderness Area. It is evident from the statements on page 14 of the developer's proposal that a detailed examination of the precipitation characteristics of this area has not been undertaken. Whether a major ski resort would be viable here thus cannot be judged. While we have sympathy with the developer's alpine village concept, we find nothing in their proposal to convince us of the suitability of the proposed site. In view of the counter-proposal of the Alberta Wilderness Association, we do not support the building of downhill ski facilities on Folding Mountain unless it can be shown that this area is so outstandingly suitable for this kind of development that the benefits of retaining it as true wilderness should be foregone. We also have doubts about the advisability of siting such a major tourist development right at the gates of a National Park. The boundaries of National Parks should be buffered as far as possible from major disturbance.

## 3. THE NORTH SASKATCHEWAN RIVER BASIN.

Two multimillion-dollar developments are proposed for the area on the David Thompson highway adjacent to the Cline River, as well as several lesser projects on which we have not received details. We recognize that there is a need for a Visitor Services Centre on the David Thompson highway between Nordegg and the boundary of Banff National Park, both because of the high recreational potential of the area in its own right and in order to alleviate excessive demand for facilities in Jasper and Banff National Parks. Nevertheless, we must express opposition to one of these major proposals, and adopt a qualified stand on the other.

The sponsors of the \$110 million proposal to build "Mount Cline Leisure Resort" envisage the construction of facilities far beyond what is needed to satisfy tourist demand. They also want to attract major international conventions, trade fairs and major sporting events, such as the Olympic Games. We seriously question, both on environmental and economic grounds, the desirability of attempting to provide for functions of this kind. The proposal assumes that attendance at such events will continue to rise, an assumption which may well prove false as transport costs rise due to the deepening energy crisis. The vicinity of the site is in any case unsuitable for winter sporting events due to low precipitation (9"- 10" a year according to the "Odyssey" brochure). In the absence of information on how the sponsors think they could raise \$110 million, we have the impression that their proposal is an exercise in kite flying.

In our opinion, the facilities provided along the David Thompson highway should be restricted to those needed to service tourists. The building of a resort town of the size envisaged would inevitably detract from the scenic beauty of the area and significantly reduce wildlife habitat. If Alberta needs more conference facilities, these can surely be provided in one of the cities. The total financial cost of this proposal must be much more than the \$110 million estimated, if the cost to the Province of providing services is taken into account. In particular, the sponsors indicate (p. 27 of their proposal) that a major new airport would be needed to bring in their clientele.

The \$5½ million Odyssey Lodge proposal is bidding for the same site as the preceding. This proposal is more down-to-earth and provides a basis for further discussion with the Government. We are, however, concerned about the impact of development in the Cline River area on wildlife range, which has already been reduced by the filling of Lake Abraham. The Odyssey Lodge proposal should not be considered in isolation, but in relation to the total need for facilities along the David Thompson highway. We note that additional proposals have been submitted for Youth Hostels and Campgrounds, as well as a "recreation centre" on which we have received no information.

It is important that these proposals should not be approved in isolation, allowing a ribbon development of facilities along the highway. A single visitor services centre should be established to provide all facilities needed between Nordegg and the Banff Park boundary. The Government should ensure that medium-priced accommodation is made available for overnight use, as well as the lodge accommodation envisaged in the Odyssey proposal. The visitor services centre and lodge would be a natural starting point for journeys into the White Goat Wilderness, which we hope will soon be restored to its original size. Wilderness users should have access to shops and restaurants here, as well as use of a supervised car park where they can leave their vehicles for extended periods. In the light of the above considerations, we have the following specific recommendations relating to the Odyssey Lodge proposal:

- (i) that the Government undertake an overall review of the need for tourist facilities along the David Thompson highway, and identify suitable sites for a visitor services centre between Nordegg and the Banff Park boundary;
- (ii) that the Odyssey Lodge proposal should be considered as part of this review, and modified as necessary to fit in with the overall planning of the Visitor Services Centre; and
- (iii) that an ecological impact study should be undertaken on the effects of the Visitor Services Centre, as soon as possible alternative sites have been identified.

We have not received any formal presentation on the proposed recreational area West of Sundre, but are aware of some of the correspondence between the sponsor, Mr. J. Unger, and the Provincial Government. Our understanding is that Provincial Wildlife Biologists are opposed to Mr. Unger's proposals on account of the adverse effects they would have on winter range for sheep and elk. This is one of the most critical areas in the Red Deer region for overwintering big game animals, including many populations which migrate from Banff National Park.

Apart from the developments themselves, the access roads that would be needed would adversely affect the distribution of game populations on winter ranges. In these circumstances we must recommend rejection of this proposal. Proposals nos. 5 & 6 in the list of "Other Proposals" also refer to this same area. They should be evaluated by Provincial Wildlife Biologists and rejected if they would adversely affect game populations in the area.

We do not oppose the proposals for four new youth hostels.

The upper reaches of the North Saskatchewan River Basin are highly attractive for wilderness recreation. We therefore support the proposals of the Alberta Wilderness Association for protecting more wilderness in this area. The White Goat Wilderness should be increased from 177 square miles to its previous size of over 300 square miles. And adjacent to the Siffleur Wilderness, the new Upper Ram - Whiterabbit Wilderness should be designated.

If these proposals are implemented, then the operators of tourist facilities on the David Thompson highway will be assured that the grandeur of their surroundings will not be impaired by human action.

In addition to the designation of new Wilderness Areas, we recommend that the Government study sites for Provincial Parks along the Forestry Trunk Road. For instance, the Ram River Falls could be the central attraction of a new Provincial Park.

## QUESTIONING BY THE AUTHORITY

MR. DOWLING:

The one thing I do not see mentioned in your brief is the matter of utility corridors for power, gas and so on. Has your chapter of the National and Provincial Parks Association taken a position on utility corridors?

DR. GRIFFITHS:

We have not made any public statement yet, but I think I can say we support the concept. There is a statement in the brief to the effect that there are too many seismic lines and perhaps people should be forced to use the existing seismic lines. It would follow from that that the number of cuts through the forest should be reduced to as few as possible.

MR. DOWLING:

What additional uses do you feel the middle income Albertan requires in the eastern slopes for his recreational use?

DR. GRIFFITHS:

I think he would like access to less overcrowded areas. I don't need to tell you how overcrowded Jasper and Banff are becoming. People want to disperse along other highways such as the David Thompson Highway. They require some facilities at a few selected points along these access roads. In the particular case of the David Thompson the distance between Nordegg, where some facilities are provided, to Lake Louise is about 100 miles. There is clearly a need for some kind of facility centre somewhere between those two points. You are near the Mount Cline area here. But whether the proposed site for the Odyssey is the optimal site is something on which we cannot commit ourselves. We think alternatives should be reviewed and an ecological impact study of the whole package that is proposed for the highway.

MR. DOWLING:

You are supporting the Alberta Wilderness Association proposals and you are also supporting the Wild Kakwa proposal. Would you support the paving of the forestry trunk road?

DR. GRIFFITHS:

We support paving the existing road to keep the dust down. I think paving has beneficial effects on the vegetation within the immediate area of the road because the animals don't like to eat dust-coated vegetation which borders these roads now. We do not support major upgrading such as is intended on the Kananaskis stretch of the road. We support paving the existing highway.

DR. TROST:

Your association is called the National and Provincial Parks Association of Canada. Do you feel there should be joint planning or cooperation between the federal and provincial governments in the planning of the national and provincial parks?



DR. GRIFFITHS:

There is obviously a need for cooperation in specific areas. Where you have proposals for developments abutting on national parks I believe you should consult with the provincial parks regarding the impact of these proposals.

DR. TROST:

Should machinery of a consultative or cooperative nature be set up or can it be done informally?

DR. GRIFFITHS:

I really haven't thought about the kind of machinery that you would need. Joint study groups have been used in the past and can be set up again. The kind of problem that needs joint study is where a proposal, such as Folding Mountain, abutts on the park and may affect animals which spend part of the year in the park and part outside. There is also a proposal for the Sundre area which would have adverse effects on the winter range of animals which spend their summer in the park and go there in the winter. This problem could be studied jointly.

DR. TROST:

There are so many burdens on the national parks that many people feel they can no longer be sustained. Consequently there is a view that facilities should be made available outside the national parks. This would call for cooperation between the federal and provincial governments but it would still relate to the problems of the parks themselves. Do you think there is a need for cooperation between the federal and provincial government on this broader basis?

DR. GRIFFITHS:

There is a need for cooperation, but I have not thought about precisely what machinery is needed. Of course you had a brief from the park service during these hearings and whether you would want to set up some formal standing body or liaison method, I'm unable to judge.

DR. TROST:

There was a recommendation for something of this sort and I was wondering if your association would have thought of it and worked out a formal position since you are interested in both national and provincial parks.

DR. GRIFFITHS:

We have not worked out a formal position beyond supporting such liaison as is necessary.



ADDRESS TO THE  
ENVIRONMENT CONSERVATION AUTHORITY  
BY  
WILLIAM JOBE, VICE-PRESIDENT  
INTERNATIONAL SNOWMOBILE INDUSTRY ASSOCIATION  
AT THE PUBLIC HEARINGS  
ON LAND USE AND RESOURCE DEVELOPMENT  
IN THE EASTERN SLOPE  
HELD IN EDMONTON, ALBERTA ON JULY 5, 1973

Essentially these hearings must address themselves with the question of environment, its conservation and its public use. The subject is "The Eastern Slopes of the Rocky Mountains".

Alberta, I am told, is either the wealthiest or among the wealthiest province in Canada. It is natural therefore that sooner or later the environment factor be brought into the balance sheet and that all activities be made accountable for their contribution to or their detracton from the quality and composition of your provincial growth.

I represent the International Snowmobile Industry Association. I state this candidly, I am aware that the acceptance of snowmobiling by a conservationist audience depends on their understanding of this great sport and industry.

In the hope of alleviating some of the fears or misapprehensions which may exist allow me first to cite two excerpts from our association's policy statement. I quote:

"Man, in his quest for developing new, better and different methods for travel, has developed the snowmobile as a means for travelling over snow. In addition to its utilitarian use, the snowmobile has added a dramatically new dimension to the field of outdoor recreation. It has virtually unveiled a new era for wintertime enjoyment. The sport of snowmobiling has given an unprecedented opportunity for more people to enjoy leisure activity in the winter season and, in most cases, as a family.

"The International Snowmobile Industry Association (ISIA), whose snowmobile manufacturer members produce approximately ninety-five percent of the industry's output has, since its inception in 1965, been dedicated to producing quality vehicles that continually incorporate the latest in both safety and design features.

"Since the snowmobile is a product that when used properly gives the user a great deal of pleasure, recreation and the wellbeing that ensues from an active outdoor activity, we as an industry believe the sport of snowmobiling will continue to expand through cooperation of both the public and private sector of our economy. However, we do not support expansion of the sport at the expense of the logical or legitimate rights and privileges of others or to the detriment of the environment. We also believe that solutions to specific problems should be based, not on emotionalism, but on logical, scientific, medical and environmental research and development data."

In a more specific way our Land-Use policy is as follows:

"Our policy is to advocate the support programs and policies for the multi-use of public lands consistent with protection of the environment. We base our policy on several facts:

1. That public lands belong to everyone.
2. There is a growing and critical need for all types of recreational use areas.
3. Only a small segment of the population can or will enjoy areas not readily accessible to population centers.

With the exception of a very few areas that may have special environmental conditions, geological or historical value, the need to establish additional restrictions on public land uses or to isolate large areas so the public cannot enjoy them should not be the effect of federal, state, province or local governmental action. Since everyone should have the opportunity to enjoy public lands, there is an ever increasing need for additional provisions and facilities for various types of activities, rather than a need for additional restrictions or wilderness areas. However, the intent of the present wilderness areas are recognized and respected.

"We advocate that snowmobiles are and should continue to play an important part in the enjoyment of the out-of-doors by people from all walks of life. Therefore, snowmobiles have a definite place in the multi-use of our public lands. Since snowmobiles have different design concepts and use applications than other recreational vehicles, their use must be evaluated differently than that of other recreational vehicles. Snowmobiles offer less conflicts to other activities, and they have a potentially smaller environmental impact than any other vehicles or activities due to the season of use and utilization of the temporary media of snow."

The policy which governs our activities with regard to public lands states: "We advocate that programming should be open-ended; that is, snowmobiles should be used any place on public lands except for documented scientific or logical reasons where their use is limited or prohibited.

"We believe it is simpler for the administrator, the enforcement officer or the snowmobiler himself to list, mark or otherwise identify the places where they cannot be used than try to list, mark or otherwise identify the places where snowmobiles can be used. Areas open, but with some necessary use restrictions, can best be handled in the same manner. We recognize that owners or managers of land should always have the prerogative of placing part or all their land off-limits to various activities or to determine the conditions under which their land may be utilized. We stress that experts in environment, as well as responsible administrators of public lands, should furnish the basic information and justification for placing specific areas out-of-bounds to snowmobiling. Citizens and public officials, through proper government channels, should make decisions on general limitations of use, problems of decor, safety, compatibility

and use saturation with due consideration for expanding the multi-use philosophy of the Multiple-Use Sustained Yield Act of 1960, as well as the economic impact on the area."

Our policy continues on the matter of Private Lands:

"We support programs, legislation and policies that permit or that will expand the use of private lands by snowmobilers and other outdoor enthusiasts. We believe that there is not sufficient public lands accessible to all those wishing to enjoy the outdoor activities they desire. Adequate and safe facilities should be accessible to all on a reasonable basis.

"The availability of private land for uses such as snowmobiling can be expanded by relieving and clarifying the property owner's responsibility through "hold harmless" laws when his land is being used by others for recreational purposes such as snowmobiling, hunting, fishing, hiking, etc.; by obtaining long-term leases or easement agreements from private property owners for snowmobile trails and by the use of some of the snowmobile registration fees or use fees for the privilege of utilization of private property for snowmobiling or for other activities.

"We encourage the development, the marking, and the maintenance of good snowmobile trails and use facilities on public and private lands for snowmobilers with consideration and respect for the environment."

The creation of this Environment Conservation Authority demonstrates enlightenment and creativity on the part of your Government.

At these hearings, the citizens of Alberta are given the opportunity to participate actively in the policy-making process by stating their wants and their priorities in the development of a grandios land.

In their desire to preserve this magnificent heritage, I am sure that Albertans will not want to be deprived of its enjoyment.

Technological advancements, greater mobility, increased disposable income, longer life span, and more leisure time have combined to cause a greater demand for recreation. And today's lifestyle compels the urban man to seek outdoor recreation.

Environmentalists will express justifiable concern in the preservation of the unique natural beauty of the Eastern Slopes, And every snowmobiler who has had the privilege to roam the foothills region will agree wholeheartedly with them.

On the fringe of any conservationist movement, however, there is a small but very articulate group which Eric Julber, a Los Angeles Attorney and ardent hiker and nature photographer has termed "purist-conservationist". "The purist", says Julber, "is, generally speaking, against everything. He is against roads, campgrounds, ski lifts and restaurants. He has very strong ideas about who deserves to enjoy natural beauty and, ideally, would reserve beauty for those who are willing and able to hike, climb, crawl or cliff-hang to achieve it. The purist believes that those who do not agree with him desire to "rape the landscape".

"The practical effect of this philosophy has been to make many of the most beautiful areas of the United States "off limits" to anyone who is not willing and able to backpack into them. Statistics show that this means 99 percent of Americans."

Because the public hearings on land use and resource development in the eastern slopes are a magnificent demonstration of democracy in action ("vox populi"), we must beware of some of nature's autocratic friends. "Their approach", said Anthony Crossland, a member of the British Parliament, "is hostile to growth in principle

and indifferent to the needs of ordinary people. It has a manifest class bias and reflects a set of middle and upper-class value judgements. Its champions are often kindly and dedicated people. But they are affluent; and fundamentally, though of course not consciously, they want to kick the ladder down behind them.

"We cannot accept a view of the environment which is essentially elitist, protectionist, and anti-growth. In fact, the anti-growth argument is not only unacceptable in terms of values; it is absurd in terms of the environment itself, however narrowly defined. For the greater part of the environmental problem stems not from present or future growth, but from past growth."

Based upon my exposure to your fine land, I am personally persuaded that all Albertans are down-to-earth realists when it comes to their outdoor recreation.

Purposedly, I have not attempted to show that snowmobiles and the environment are compatible. This axiom is demonstrated in the surveys, reports and learned papers which I am respectfully submitting to your attention.

The people of Alberta are requested by their Government to express their voice on land use, companions or alternatives in one of the most astonishing concentration of natural beauty on earth whose adjoining parks of Banff and Jasper have brought fame to Alberta the world over.

At the termination of these hearings, the needs and wants presented by the people of Alberta will find their expression in the recommendations of this Authority to the Government. I am confident that snowmobiles will be accommodated in the ultimate land-use plan because these vehicles play an important and essential



part in the outdoor recreation of more than 200,000 of your citizens.

Thank you.

PAPERS SUBMITTED:

OFF ROAD RECREATION VEHICLES - A Department of The Interior Task Force Study.

THE ECONOLOGICAL IMPACT OF SNOWMOBILES ON OUR PUBLIC LANDS - An In-depth Survey by Popular Science

INTERIM REPORT BY THE ONTARIO SELECT COMMITTEE ON MOTORIZED SNOW VEHICLES AND ALL-TERRAIN VEHICLES, May 1973.

POLICIES OF THE INTERNATIONAL SNOWMOBILE INDUSTRY ASSOCIATION - April 1973

AND MISCELLANEOUS ARTICLES.

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

One criticism we hear from people concerning the use of the snowmobiles in the wilderness areas is the noise factor. What are the manufacturers doing to get this noise down to an acceptable level?

MR. JOBE:

Over the last five years the sound level of the snowmobile has been reduced by 75 per cent. The present operating sound level for the typical new snowmobile is about that of a sewing machine in a home.

The expectation is, and the federal government acknowledges this in its new noise level standards, which will be announced in August, that the sound level will be further reduced in keeping with the state of the art, perhaps by another 50 per cent in the next four to five years. We have reached the point in our sound level reduction of being concerned with the sound of the rubber track, the air intake sound, not only the exhaust system, but in normal usage, that is speeds in the high teens, the sound level is below that of an automobile going down the highway at 50 miles per hour.

MR. KINISKY:

One of the things which troubles us is not the reasonable snowmobile user who has some respect for the wilderness, but the number who do not. I'm citing cases from a study in Wisconsin in which they actually saw and catalogued 50,000 separate cases of animal harassment. What sort of policing techniques can we use to stop this sort of activity?

MR. JOBE:

One of the things the manufacturers have committed themselves to and the primary focus of the association's expenditure is safety education and training. There are two basic areas in safety; one deals with the machine itself and its safety qualities and the second and perhaps more significant is the good common sense of the operator. This deals with age limitations, speed limitations and place of use. We are aware that over the very brief history of this machine snowmobile groups, responsible citizens at the local level, have done a remarkable job of self-policing.

There is no defence to be given to bad conduct wherever you see it. Unfortunately we have to overcome some long memories in this area. I think recent conduct has been appreciably better, at least we are pleased with the reports we have received. For example in Alberta, I am told, there was only one fatality last year, which is a pretty fine record.

MR. KINISKY:

We have had people from the snowmobile associations tell us there is no ecological damage done by the snowmobile. They were promptly followed by a Mr. Lousier, a graduate student, who brought to our attention many kinds of damage that are caused by the snowmobile. It doesn't vanish just because the snow melts.

MR. JOBE:

I am not an expert on the subject. I'm aware that the time of the year when this occurs is the dormant time for nature. It is the time when you and I go out in the spring and hear the birds sing and watch the squirrels climb in the trees and watch the fishermen's cookouts. We are not in that kind of environment. We are in the outdoors, hopefully in a widely dispersed pattern, and are not in a heavily concentrated use area when most of nature is asleep.

In terms of these slopes I am told that much of the feeding of the large game is in the lower elevations. They come down off the slopes as the snow gets deeper. Reason tells me that if I'm travelling on two feet of snow in a floating mechanism, in the sense that I'm not hitting bottom and I'm in the size of vehicle that compels me to be in fairly open area - in other words I can't climb trees or go over rocks - the probable impact in terms of what is observable seems to me to be minimal.

MR. KINISKY:

These machines are totally useless in deep snow. You have to carry them as much as they carry you. The problem is in the use of the same tracks over and over again, the consequent compaction of the snow, the much deeper penetration of frost, the stopping of animals and small life which normally move back and forth under the snow; this is the kind of damage that was referred to us.

MR. JOBE:

I'm not aware of any evidence of extensive damage. My conclusions are based on what appears to me to be sensible and I defer to other studies. For example, there is evidence that in high density deer country building a highway does not drive the deer away. They adjust to the presence of highway traffic. Much of the use of snowmobiles is in areas where we don't generally find alfalfa where compaction might make a difference. We are normally on trails that may be fire trails, logging roads, timber lanes and that sort of thing where again, bear in mind that when the snow melts you really haven't rutted the soil. Ruts are there but it's pretty hard to find evidence of damage.

MR. DOWLING:

The snowmobile market has largely been created during the last ten years and its growth has been rather phenomenal. There have been a large number of companies involved in the manufacture of snowmobiles, is that correct?

MR. JOBE:

There have been historically a great many. It's a little bit like the automobile industry; it has been shaken down. The 19 members of our association manufacture 95 per cent of the worlds production.

MR. DOWLING:

I have seen figures of something like 68 manufacturers, is that true?

MR. JOBE:

There were probably several hundred at one time. But today you would be hard-pressed to find many more than 22.

MR. DOWLING:

What does the market look like in the future? Is it onward and upward forever or is the thing going to flatten out?

MR. JOBE:

The market has flattened out. I understand it levelled off about 18 to 24 months ago. I rather think that the use of the vehicle will largely expand with an awareness of their fun and with the development at a local level of the kind of place which can be used compatibly with the rest of the neighbourhood. On the part of our industry there is a grand hope that the market won't drop.

DR. TROST:

You indicated there were 200,000 citizens who were enjoying snowmobiles. Are those 200,000 in Alberta?

MR. JOBE:

I am advised that is true. The figure is a developed figure based upon the existence of approximately 60,000 machines in Alberta. The normal usage in a family gives you a multiplier effect and gets the 200,000 figure, which is a very high percentage figure in terms of the population of 1.6 million.

DR. TROST:

The use of the snowmobile particularly when it can be used by such a great range of ages and under such free and unfettered conditions requires a little bit of experience. Do you feel that the Snowmobile Association covers a sufficiently large proportion of the owners that self-education, which is always the best kind, could be done effectively?

MR. JOBE:

That is our hope. There is a great deal of regulation by various governments at the local level in terms of where you can travel. This province has a very liberal snowmobile law. In terms of sensible neighbourly and safe use the association is directing its effort to a formal program of self-discipline a little bit like the motor boat safety training program and the Red Cross badge concept, a code of ethics which has some teeth in it whereby it might be possible for a private landowner to say he would allow a certified club member on his property because he knows that person is responsible. But unless he carries the badge he won't have any part of him. Whether or not this will evolve I do not know.

We are not interested in defending the abuser of my sensibilities or yours or anybody elses. What we are interested in doing is maintaining an alive kind of winter activity for people who 20 years ago had no alternative to their radio sets, televisions or books. For six months of the year they are denied outside activity and it's an important part of their life so I'm told. I have not experienced this in North Carolina, but I'm told it's a significant part of their life.

DR. TROST:

I thought you rather underestimated our winter in that six months statement. Are there education programs now under the snowmobile association?

MR. JOBE:

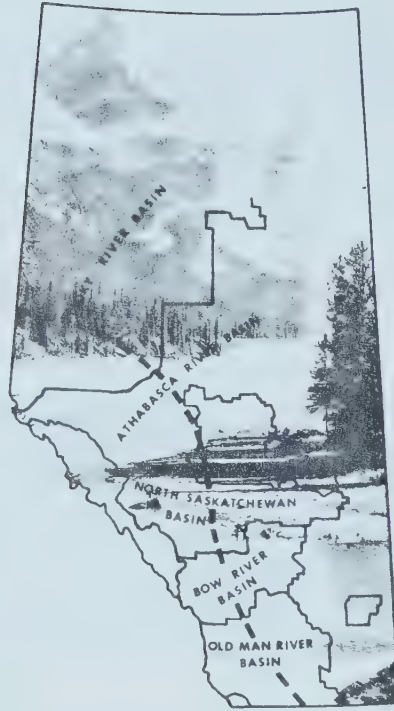
Yes. We are talking about substantial sums of money being spent by the manufacturing industry in addition to that which individual club members contribute for the same purpose of correcting bad practices and bringing safety into the field, of getting regulation that permits the maximum degree of freedom. The problem in some communities is the desire to put all these sewing machines in the same parking lot. Then they wonder why it's so noisy out there. The idea is to disperse them as broadly as you can so you really don't see them, and they have a very low profile. You don't want them on the super highways because it's hazardous. You don't want infants driving them and sometimes we see that.

DR. TROST:

Is there any informal development within the association of a certification or badge program?

MR. JOBE:

There are such programs in existence in several of the Canadian provinces and some of the U.S. states. There is no uniform system which has the kind of general support that we can say, this is a certified program. This is what we are aiming for. We have a meeting in August in Winnipeg on this particular proposition. There will be representatives from all organizations throughout the North American continent consisting largely of provincial and state level organizations of users, dealers, distributors and manufacturers.



LAND USE  
and  
RESOURCES DEVELOPMENT  
in the  
EASTERN SLOPES

REPORT BY THE SCIENCE ADVISORY AD HOC  
COMMITTEE ON THE EASTERN SLOPES

PRESENTED BY: DR. R.G. IRNSIDE

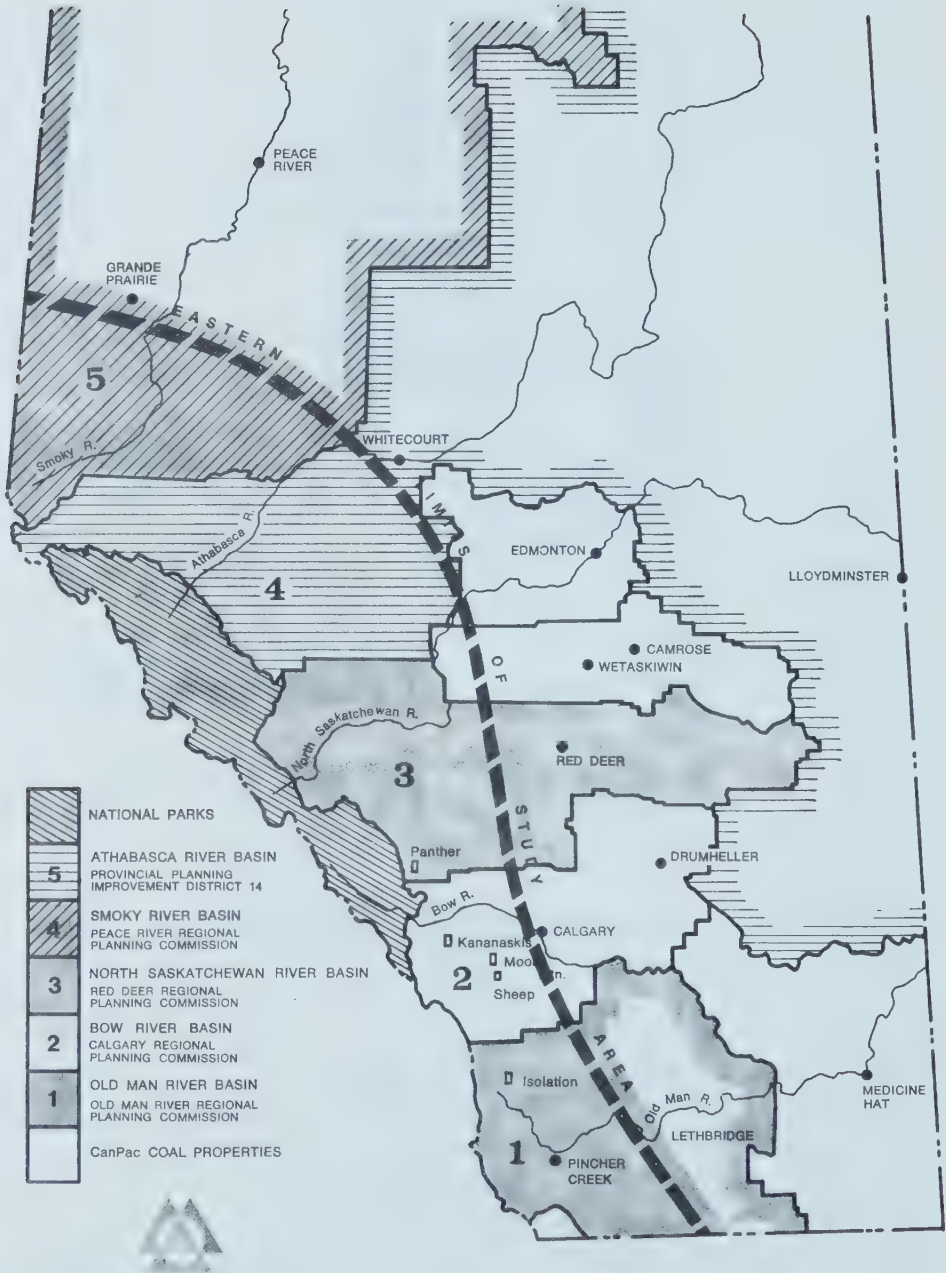


ENVIRONMENT CONSERVATION AUTHORITY  
ALBERTA

The Environment Conservation Authority  
presents this publication as background  
information for its upcoming public  
hearings.

This material was prepared by an outside  
agency and does not necessarily express  
the views of the Environment Conservation  
Authority.





ENVIRONMENT CONSERVATION AUTHORITY  
ALBERTA

REPORT OF THE SAC AD HOC COMMITTEE  
ON THE EASTERN SLOPES HEARINGS

---

ACKNOWLEDGEMENTS

This report has been prepared on behalf of the Science Advisory Committee of the Environment Conservation Authority, by an ad hoc committee comprised of Dr. L.D. Cordes, Department of Geography, University of Calgary, Dr. L.V. Hills, Department of Geology, University of Calgary, Dr. R.G. Ironside, Department of Geography, University of Alberta, and Dr. P.J. Smith, Department of Geography, University of Alberta (chairman). Miss Jennifer McQuaid and Mr. Frank Pearce acted as professional assistants for a short period in April and May, 1973. They were responsible for the basic data collection and for drafting the first version of the report which follows. The report has been greatly modified in later drafts but Miss McQuaid and Mr. Pearce broke through the initial barrier of marshalling ideas on paper. Also, during the data collection phase, they interviewed many people whose assistance must be acknowledged. It has not been possible to list all these contributors by name, but their affiliations are identified in Appendix I. In addition, Miss McQuaid and Mr. Pearce spoke to many people who contributed as interested individuals rather than as spokesmen for an agency: their anonymous assistance is greatly appreciated.

INTRODUCTION

Descriptions of the location and characteristics of the Eastern Slopes region are to be provided in other reports, and so will not be attempted here. There is one general point, however, which deserves

emphasis. From superficial acquaintance, it would be easy to conclude that the Eastern Slopes region is an homogeneous entity. It is equated, in most people's minds, with the foothills of the Rocky Mountains which, in turn, projects a simple, popular image of hills and trees, deer and fish. The reality, of course, is very different. The region is varied and complex, both environmentally and in its human use. It is very much to be hoped that this variety and complexity will be adequately revealed during the course of the public hearings. It quickly became evident to the members of the ad hoc committee that their resources of time and staff were insufficient to take on this task themselves. It also became evident, however, that there are many people, including many in government service, who are already highly knowledgeable about the Eastern Slopes region, and have devoted a great deal of professional attention to it. The public hearings will lose much of their potential value if these people are not heard from, freely and openly.

Another fact, which quickly made itself evident, may also run counter to the popular image. Although the amount of permanent settlement in the Eastern Slopes region is small, much of the region is used in some way or another, and often in competing ways. It is already a very valuable region to the people of Alberta, but its greatest value is still in the future. It has an impressive array of highly-regarded resources, and lies just west of the province's population and economic axis. Such propinquity leads inevitably to pressures on the resource base, to disturbance, disruption and conflicts of interest. Yet the pressures of the present are as nothing compared to the pressures which the region

is likely to have to bear in the future. It is inevitable that increasing demands should be put on its resources, an inevitability that is all too apparent to those who have been close observers of the region for even the past ten or twenty years. It is by no means too soon to implement a comprehensive, integrated management plan for the whole region and all its resources.

From this perspective, the ad hoc committee felt that they could best make two contributions:

- (i) to provide a general statement of concepts of resource and land use planning which should be recognized and realized in any plan for the Eastern Slopes region; and
- (ii) to attempt to identify the most critical of the use conflicts which now exist in the Eastern Slopes region. On the one hand, these represent problems which must be resolved in any plan; on the other hand, they are portents of an ever more pressing future.

#### SOME GENERAL CONCEPTS OF RESOURCE AND LAND USE PLANNING

The following concepts of resource use and management are relevant wherever the need for planning is admitted. They apply with equal force to private and public resource responsibilities, but they should be adhered to as a matter of course in those situations in which publicly-owned resources are involved. The central principle is inviolable: the resources must be managed for the maximum benefit of the people for whom they are held in trust. In the case of the Eastern Slopes region, this is the people of Alberta, both the present people and those who will follow.

(i) "Resource" is a man-made concept. A resource does not exist until it is needed to satisfy a human desire: it is derived from the economic, social or psychological values which are held at a particular place and a particular time.

(ii) Many areas have experienced a succession of resource uses, witnessed most obviously in the form of land use changes. These have resulted from human ingenuity, from changing needs and values, from the exhaustion of a resource and, sometimes, from the effects of natural processes. Because a resource is used in a particular way at a particular time is no guarantee that it will or should continue to be used in that way.

(iii) Conservation of resources is mainly a problem of determining the wisest long-term use. The balance between present and future requirements is particularly critical. In the case of renewable resources, the central principle is clear: management policies must be designed to ensure that the resource will be continuously renewed, with no decline in quality. For non-renewable resources, two different principles apply. Some resources (e.g. unique wildlife habitats) have value only as long as they are maintained without change: in such cases, conservation is equated with preservation. Other resources (e.g. minerals) have no value until they are changed: for these, conservation means ensuring that the maximum benefit is extracted from the resource before its ultimate exhaustion.

(iv) When resource use is being planned it is necessary to know the type or types of resources which are available; their quality, extent, location and expected life under different rates of use; whether they are

renewable or non-renewable; and the nature of any competition or conflicts in demand. A classification scheme, and detailed maps and projections, are therefore required.

(v) Most resource use problems ignore the existing pattern of political boundaries. If at all possible, then, new spatial units should be established so that the resource problems may be embraced within a single jurisdiction.

(vi) Land is a relatively fixed resource in terms of its extent. It also forms the basis for many other resources, which must therefore be regarded as spatially finite. When this fact is coupled with the facts of population increase, and urban increase in particular, the seeds of conflict are very evident. In simple terms, more and more people are competing for the right to use a fixed resource. This generates conflicts among the owners and users of privately-owned resources, between owners and non-owners, and between private and government interests. It seems inevitable that the tempo of these conflicts should quicken. The use of planning mechanisms to alleviate or prevent them must become increasingly urgent.

(vii) Cost-benefit analysis, for all its admitted deficiencies, is an indispensable tool in resource evaluation. The calculation of economic costs and benefits is now reasonably straightforward. The real difficulties concern the weighting of social costs and benefits, particularly those that are currently non-quantifiable. With increasing scarcity, however, and the increasing importance of non-economic values (e.g. the demand for wildlife and wildland preservation), more refined techniques

are being developed to aid in the critical judgments which have to be made among resource use alternatives.

(viii) There is a fundamental difference between commercial and governmental attitudes towards resource use planning. Commercial interests are usually assumed to have short planning perspectives and high return expectations, with some notable exceptions. Public authorities, on the other hand, are expected to take a long-term view, and to protect the common good from private cupidity. The expectation is not often fulfilled but that does not reduce its legitimacy. Nor are the two attitudes necessarily in conflict. Long-term management for the common good may also enhance the private gain, in both short and long terms, without unduly restricting the freedom of action which is implicit in the private enterprise system. The main freedom which is constrained is the freedom to be wasteful and irresponsible in the use of resources.

(ix) Today's society is the custodian of resources for future societies. The planning process is the means by which this stewardship is effected, if there is the essential political support for conservation and resource use planning. This point needs to be stressed. There have been many attempts at planned regional development to remedy disparities in standards of living. The legislation was passed, the techniques to implement remedial programs were devised, but the political will to make them succeed was lacking. The majority of these programs have thus failed. This can also happen in the resource planning field unless there is unreserved government support.



(x) Land ownership, even when it includes resources on or under the land, refers only to part of the bundle of rights which is embraced by the term "land tenure." The senior government for the area normally reserves some rights to itself, and invariably does so in Canada. What a land-owner has, therefore, is not the land itself but an amalgam of rights over the land, recognized by law as property. The rights which the sovereign government retains - including those of eminent domain, escheat, policing, taxation, and pollution and development control - always supersede those of the individual owner. At the same time, rights of arbitration, compensation and appeal are normally provided by legislation, for those situations in which an individual may experience economic or other loss in the public interest.

From these concepts of resource use planning, a number of goals can be discerned:

- (i) to secure the orderly and optimal development of resources;
- (ii) to minimize conflicts in resource use, among groups and individuals, and between them and the general public interest;
- (iii) to maximize the public welfare; and
- (iv) to protect individual rights and freedoms to the greatest extent which is consistent with the long-term public interest in the context of multiple resource use planning.

#### SOME USE CONFLICTS IN THE EASTERN SLOPES REGION

##### Grazing

Grazing is one of the principal land uses of the Eastern Slopes region. Over 100,000 acres are leased by various grazing associations,

to provide supplementary range for cattle, horses and, in the past, sheep. The management of these leases is the responsibility of the Alberta Forest Service, which restricts the number of livestock which can be permitted in any area on the basis of an estimated carrying capacity. This takes account of such things as the quality of the range, past experience with grazing in the area, and the needs of ungulate wildlife. Some forest reserve areas are excluded from livestock grazing, if excessive conflict with ungulates or human recreation may occur.

In gross terms, through the operation of the carrying capacity controls, over-grazing does not occur in the Eastern Slopes. When the grazing patterns are analyzed in detail, however, evidence of serious localized problems does emerge. It has been suggested, for example, that livestock allocations are sometimes exceeded, and that more rigorous policing of the grazing regulations is required. It has also been suggested that the allocations are too high in some instances. The most serious problem, though, is one of maldistribution of livestock within the grazing allotments: the allocation is not excessive if the entire allotment receives optimum grazing, but the animals tend to congregate in certain favoured situations. This, too, is primarily a policing problem. The regulations specify that the livestock must be dispersed but, not unnaturally, they tend to drift into those areas (such as valley bottoms) where there is good shelter and easy grazing. In some instances, the maldistribution is temporal as well as spatial. If, for example, cattle are allowed onto the leases too early in the spring, and are allowed to remain on them too late in the fall, the possibility that the range will have to be shared with ungulates is enhanced. The risk of competition between the animal populations, leading to localized over-grazing, is

therefore greatest at the extremities of the season. Competition for higher summer pasturage in the alpine meadows is less severe, because cattle seldom graze there. At the same time, however, the alpine environment is easily disturbed and any competition between wild and domesticated ungulates can lead to serious damage.

The active conflicts generated by livestock grazing are principally with biotic and watershed management. They can take a variety of forms. The extent and quality of grazing land available to wild ungulates may be reduced; overgrazing, particularly on open exposed slopes and terraces in the early spring, may lead to destruction of the vegetative cover, and thus to accelerated erosion which, in turn, decreases the likelihood of plant regeneration; trampling by hoofed animals can also lead to the destruction of plant cover, and to excessive compaction of the soil which, in its turn, leads to increased run-off; springs, seepage hollows and stream banks may be damaged by excessive trampling; and the sediment loads of streams are increased, with a consequent reduction in water quality, excessive siltation and damage to fish spawning grounds. There are other potential land uses which are hindered, and sometimes impossible, in the grazing leases. Some forms of recreation, for example, particularly intensive recreation, are almost completely incompatible with grazing. In some instances, the grazing allotments become, in effect, single-use regions. Such interests as wildlife and watershed management may be recognized in the government's regulations, but they may not necessarily correspond with the graziers' attitudes.

On the positive side, many grazing areas are well managed, with no evidence of conflicts or overgrazing, or the problems that can stem

from them. Grazing can also be a management tool: the risk of forest fires, for example, can be reduced if livestock are used to control the accumulation of forest litter and the growth of understorey.

The available evidence does not suggest that livestock grazing is an improper use in the Eastern Slopes region. Nor does it appear that the present grazing regulations are deficient. The problems, where they occur, are management and enforcement problems. Through such techniques as more restricted grazing seasons, the use of more range riders, and the active dispersal of livestock (e.g. by reducing herd sizes, by providing more frequent salt licks, and by making more use of temporary drift fences to control stock movements), grazing conflicts and overgrazing could probably be eliminated. Closer and more detailed monitoring of the environmental effects of grazing in known problem areas should also be carried on. Management should have the capability to react almost instantaneously to signs of environmental deterioration, by reducing the approved livestock allocation, for instance, or by prohibiting grazing in specific areas, either indefinitely or for fixed periods.

#### Petroleum Industry

Petroleum companies, in the past, have had undisputed rights of development on leased lands, which reduces the potential for overt conflict, particularly with other primary industry. Pulp and lumber companies, for example, have been compensated when exploration and drilling operations have caused timber losses on their leases. Nonetheless, environmental problems and conflicts have arisen, and must be viewed as serious. The foothills landscape has been scarred by well sites, access

roads, seismic cutlines, and pipeline and power line rights-of-way. Wildlife have been disturbed and their ranges reduced, not just because of the extent of these activities but also because the roads and cutlines open up large tracts to motor vehicles of all kinds (including snowmobiles and all-terrain vehicles). As one consequence, hunting pressures may become excessive. On the positive side, the cutlines do regenerate and they can provide good browsing for ungulates. Even so, it is not uncommon for petroleum exploration and development to result in a reduction of wildlife populations, especially predators such as the grizzly. Finally, there is the risk of pollution through oil spills, leakage and sulphur emissions. The special problems of the last have already been documented in a previous series of ECA public hearings.

The seismic cutlines form the most widespread and disruptive feature of the petroleum industry's impact on the Eastern Slopes. Seismic companies must obtain geophysical licenses and permits from the Department of Mines and Minerals, and are bound by the Department's regulations with respect to the geophysical portion of their operations. In addition, before exploration can be permitted in any "green zone," a letter of permission must be obtained from the Department of Lands and Forests. With this proviso, however, seismic companies are generally given the right to operate on all crown land, with the exception of some restricted areas, such as the Tri Creeks watershed. If the land is already leased to pulp or lumber firms, compensation has to be agreed upon, but exploration is not prohibited. Similarly, on grazing leases the seismic companies may operate along undeveloped road allowances, subject to arbitrated conditions.

The interval between cutlines can be regulated by the Department of Lands and Forests and is not supposed to be less than one-quarter of a mile or, in rare cases, 600 feet. The width is also restricted, to a maximum of 25 feet. In the past, a north-south and east-west grid control pattern was followed, but greater flexibility of orientation is now permitted, to allow the control pattern to be adjusted to local variations in geological conditions. Efforts are now made to ensure that cutlines for different explorations do not duplicate each other, in too close proximity. This was not always the case in the past and it can still be a difficult constraint to impose, particularly when a new grid control pattern is being superimposed on one aligned to the cardinal points.

An inevitable problem of establishing cutlines to conform with grid patterns, however they are oriented, is that they are not sympathetic to terrain variations. This is particularly critical in an area of broken relief, such as the Eastern Slopes. Cutlines cross streams at all angles, and traverse steep slopes, and erosion and siltation are accelerated. Seismic operations and watershed management have frequently been in sharp conflict. The Department of Lands and Forests, though, is now facing up to this problem. Under the Forest and Prairie Protection Regulations 1972, all cutlines must cross streams at right angles and the Department must be satisfied that erosion is being prevented along them. It would be very desirable to extend these regulations to include such things as the responsibility for revegetation of the cutlines, with due regard for wildlife needs, and prohibitions

or restrictions on the use of the cutlines by motorized vehicles. Erosion and the conflict with wildlife management, through the increased disturbance of animals, are still the most serious problems which are generated by seismic exploration.

### Coal Mining

Alberta has very large coal reserves, the current estimate being about 47 billion tons. However, only a small portion of this total (about 2 billion tons) is of coking quality, and it is here that the Eastern Slopes region makes its main contribution. Alberta's proven reserves of coking coal are concentrated along the mountain-foothill boundary zone, from south of Coleman to the B.C. border west of Grande Cache. The total area is not great (about one-half of one per cent of the foothills region), and the principal mining centres (Coleman, Canmore, Luscar and Grande Cache) are widely dispersed, but the local environmental impact is always massive.

Mining in the foothills presents many difficulties. Access is often poor, the coal seams are frequently steeply pitched and of variable thickness, and methane gas is of common occurrence. Recovery levels are therefore low: at Grande Cache, for example, the recovery rate is not much more than half the norm of 57 per cent for underground mining. The recovery rate increases notably for strip mining, but only 7 per cent of the proven reserves of coking coal in the Eastern Slopes are suitable for stripping. In total, only 30 per cent (600,000 tons) of the coking coal reserves is actually recoverable.

Many land use conflicts and problems arise from surface and sub-surface mining. Pitheads, railways, spoil heaps and the other character-



istic surface features are very obtrusive and unsightly. Dust and noise pollution are common, and conflict with both wildlife management and recreation. Water and forest management practices can also be interfered with, particularly on the irregular toothhills terrain. Forest clearance and mineral working on sloping ground lead obviously to increased instability, accelerated erosion and run-off, and increased siltation of streams. The spoil heaps may also be unstable, with consequent slumping into stream channels. Climate and terrain conspire to make revegetation a slow process; reclamation of spoil heaps and stripped areas is particularly difficult, and there are no records yet of successful reclamation in the sub-alpine zones. Seepage and runoff from coal tunnels and spoil heaps may contain harmful chemical pollutants. In the Coleman area, for example, the coal effluent has a high iron content, which oxidizes and precipitates out onto stream beds: the stream habitats are then damaged or destroyed. Stream turbidity is also increased by the addition of coal dust. Water temperature is increased by the absorption of light energy, algae and plant growth are often increased, and fish mortality may rise. These problems are all heightened by the fact that present and prospective mining are concentrated in areas which are environmentally sensitive - at high elevations, on steep slopes, and at the heads of major watersheds.

Another recurring objection to coal mining is that ungulate wintering ranges are disturbed. This is particularly true for strip mining, with its extensive ground disturbance and its dependence on heavy, noisy equipment. The newly-approved No. 9 mine at Grande Cache, for example,

may eliminate goat and sheep ranges. At this stage, it is impossible to know how damaging the stripping will be but the opportunity should be taken to monitor its effects very closely. There are several other areas in the Eastern Slopes where prime ranges overlie coal leases (e.g. on each side of the Panther River, just outside the Banff National Park boundary; east of the headwaters of the Elbow River; in the Highwood and Sheep River basins; along the upper Oldman River; directly north of Rock Lake, in the Kakwa Falls area; south of Exshaw; and extensively between the Clearwater and Blackstone Rivers). Before development is permitted on any of these leases, their prospective impact on wildlife behaviour and range should be evaluated in the light of the Grande Cache experience. If an animal population is likely to be endangered by a proposed mine, the actual and social costs of the wildlife loss must be weighed against the benefits of coal extraction.

In addition to wildlife analyses, the decision to develop new mines should always require the assurance that permanent environmental damage will not result. In particular, an acceptable reclamation scheme must be part of the development proposal. This has not previously been required of surface mining operations in the forest reserves, a deficiency which has now been rectified in the newly-adopted Bill 47. Although coal mining is comparatively restricted in the Eastern Slopes, its local impact is devastating, and the impact of coal exploration is far-reaching. A more scientific approach to the evaluation of development sites is therefore imperative. In some instances, this could lead to mining being disallowed. Past regulations were not sufficiently comprehensive or forceful. There have been some successes (e.g. prose-

cutions for stream pollution in the Luscar area), but the greater environmental concern demonstrated by Bill 47 must be enforced to be effective.

### Forest Industries

The Minister of Lands and Forests, in agreement with pulp and lumber companies, issues leases and licenses to harvest forest products. In the case of the three major firms, the leases apply to extensive areas, known as forest management areas, which have to be managed on a permanent yield basis. Smaller operators work within much more limited areas and are licensed for limited periods. Amongst other things, they must submit an annual operating plan to the Department of Lands and Forests for approval each year. This specifies the amount and location of the harvest, and the technique of cutting (e.g. whether clear-cut, in which all timber is felled, or a selective harvest of a fixed percentage of the timber, or of all timber above a certain size). The Department has also established guidelines for the conduct of the felling operations, and reforestation is controlled by agreement between the firms and the government.

The prospects for enlarging the area of forest industry activities are not great. Future felling will be largely restricted to second-growth forests. Because of the fire history of the Eastern Slopes, most of the timber in the region is immature. There are numerous examples of surviving stands of mature timber, but in total they extend to only about 10 per cent of the land area. Any harvesting of this mature timber should be done with great care. It should be phased to ensure a continuous supply of maturing trees, and it should be timed to avoid the deterioration which accompanies over-aging.

As with other resource industries, the principal conflicts are likely to be with wildlife and watershed management. Some are common to all the industries (e.g. the problems of erosion, siltation and wildlife disturbance that can accompany the opening of roads and cutlines); others are unique to the forest industry. If, for example, designated trapping areas are cut over, the populations of fur-bearing animals will be affected for many years. Current clear-cutting practices also have obvious implications for ungulate populations. While clear-cut blocks are generally limited to maxima of 80 acres for pine and 40 acres for spruce, the block size on the pulp leases has sometimes been increased to 500 acres and 250 acres respectively. Moreover, the intervening uncut strips have sometimes been cleared before the original blocks have regenerated. The larger clearings may be frightening to animals, causing them to abandon the area; the possibility of wind erosion and damage to seedlings is also enhanced. On the positive side, small clear-cut areas can produce desirable forage, and their fringes provide good shelter.

Conflicts between forestry and other industries are minor, but they can still assume local importance. When seismic cutlines continue to be used as trails, for instance, forest regeneration is likely to be hindered. The same is true if cattle and horses are permitted to graze on cut-over land (especially in the north); this may be a problem on the Northwest Pulp and Power lease, particularly between highway 16 and the Athabasca River. The construction of forestry roads may also be restricted on grazing leases which are situated within forest management areas. Conversely, oil and gas exploration and development may require the clearance of forest for access roads and power and pipe lines; the Forest Act does provide for compensation, but only if

more than one per cent of the lease is cleared. The whole question of access roads, for all purposes, in forest management areas is a worrisome one: much firmer action is needed to restrict their numbers and to ensure their eventual reclamation.

Pollution is not a serious problem in the forest industry, generally. Pulp mill effluents are the most likely offenders, and warrant close regulation. Foam and discoloration, for example, can be observed in the Athabasca River below Hinton and, although the emissions are not greatly in excess of the maxima set by provincial regulations, the scientific validity of these maxima has not been seriously measured.

A final and rather different use conflict is that posed by recreation. Mature forest areas are highly attractive for most forms of outdoor recreation, particularly if they are combined with interesting terrain and water. At the same time, however, intensive recreation is incompatible with commercial forest management. One common response is exemplified by Proctor and Gamble which has reserved 3000 acres at Kakwa Falls and Two Lakes for public recreation. Much larger reserves are in demand, though, and the recreational pressures on the forest management areas are bound to become more urgent. The demand for continued high wildlife production may also put increased pressure on the forest industry to design and regulate its management practices to optimize this benefit.

### Wilderness

The notion of wilderness preservation has been given legal force in the Eastern Slopes region, under two separate pieces of legislation.

The first set up the Willmore Wilderness Provincial Park; the second, the White Goat, Siffleur and Ghost River Wilderness Areas. This dualism reflects some of the confusion which afflicts the wilderness concept, wherever it has been applied. For example, can a "wilderness" also be a "park," or are the two inherently incompatible? Should a "wilderness" be preserved, intact and unaltered, no matter what resources it contains, or can resource exploitation be accepted if the area is restored to a near-natural state? There are no scientific answers to such questions, and there is no single concept of wilderness. The definition of the nature and purpose of wilderness is a reflection of the values and attitudes of society at a particular time.

Insofar as there is agreement on a wilderness concept, it would emphasize preservation of the existing environment, the prevention of development, restricted and motorized access and severely limited use. The Alberta Wilderness Act prohibits hunting, horse-travel, fishing and berry-picking, as well as all motorized access and industrial disposition. The Willmore Wilderness Provincial Park is not so restricted, however: it is open to the non-mechanized forms of recreation which are prohibited in the Wilderness Areas. Also, mining companies have been given sub-surface rights and exploration privileges, and roads have been constructed, with the approval of the Department of Lands and Forests. Further development has recently been frozen to allow the government to review the purpose of the park. Similar development pressures are being experienced elsewhere, particularly in de facto wildernesses which have not yet been given legal protection.

If it is accepted that wilderness preservation is a desirable goal, the Eastern Slopes have a major prospective role. In selecting wilderness areas for special protection, though, two general considerations should be kept in mind.

(i) Areas should not be designated simply because they are on undeveloped, inaccessible crown land. There should first be something worth preserving, such as a high potential for wildland primitive recreation or a special wildlife habitat. It has been stressed repeatedly in this report that the greatest conflicts generated by resource development are in the form of aesthetic, wildlife and watershed disturbances. Wilderness can provide an opportunity to protect endangered plant and animal species, or to secure sensitive watersheds, or to satisfy several forms of primitive recreation. It is possible to designate different types of wilderness, to serve different purposes. In all cases, though, the appropriateness of the wilderness designation must be determined through detailed scientific analyses.

(ii) It must be possible to eliminate all present or potential use conflicts, not just within the wilderness but in adjacent areas which could affect it adversely. For example, there seems little point in designating the lower portion of a stream basin as wilderness if the headwaters of the stream are not also under a development ban. Similarly, the designation of a wilderness area must entail a clear commitment to sterilize any resources whose exploitation could result in environmental damage or deterioration. Some exploitive activities (e.g. grazing, trapping or outfitting) might be permissible in some types of wilderness, but not in others (e.g. in a recreational wilderness, but not in



a wilderness which is being protected for scientific reasons).

### Recreation

In terms of number of people involved, dollar value and prospective growth, there can be no doubt that recreation is potentially the most significant activity in the Eastern Slopes region. Many factors contribute to this. On the demand side, there are such things as increased leisure time, increased mobility, increased discretionary incomes and larger urban populations. On the supply side, there is the natural attractiveness of the Eastern Slopes - its hills, forests, lakes, streams and wildlife. A wide variety of recreational activities are possible in the area, from wilderness travel by horse and foot to automobile touring with luxury accommodations. By virtue of its proximity to some of the most celebrated national parks in the world, and its inherent appeal as one of the few remaining, comparatively unspoiled "frontiers," the Eastern Slopes region has the potential to draw visitors from all over North America. The main pressure, though, is likely to continue to come from Albertans who are seeking an outdoor experience under near-natural conditions. Camping, fishing, hunting, canoeing, hiking, trail-riding, snowmobiling and skiing will probably continue to be the activities most in demand. It is also evident that a substantial new demand is emerging, for the construction of large-scale commercial recreational facilities. These are intended to provide a variety of activities, not all of which are intimately linked with the special qualities of the Eastern Slopes environment (e.g. golf courses and swimming pools).

Some of the problems which are posed for recreationists have been mentioned in previous sections. Very frequently, recreation is incompatible with resource exploitation. The relationship is a two-way one: resource exploitation depletes the environmental qualities which are attractive to recreationists, and recreational demands can be a hindrance to industry.

Another dimension of the environmental problem generated by recreation is one which has already been experienced in many parts of the world - overuse. This is evidenced in many ways but most particularly in congestion and environmental degradation. In short, the quality of the recreational experience is weakened or destroyed by its very popularity. The problem has many manifestations, any one of which may be enough to spoil a particular recreational outing - the frustrations and hazards of driving on congested highways, of inadequate accommodation, of crowded service facilities, of fished-out streams and of polluted water and beaches; the degradation, even the destruction, of trails and vegetation; and the disruptions of wildlife behaviour leading, in its extreme form, to outright conflict (e.g. with bears in national park campsites). These sorts of problems are in their infancy in the Eastern Slopes, but they are already beginning to assume serious proportions at peak recreational periods, such as holiday weekends in summer. Recreation is just as likely to conflict with sound environmental management as any of the more obviously exploitive industries. It is no more proper to assume that uncommitted crown land can automatically be turned over to recreation than to lumbering or grazing.

This leads to the important point that recreation is an economic activity, just as the extractive and agricultural industries are. What-

ever its physical and spiritual benefits, recreation can also be an important contributor to the regional economy. It can generate income and employment, and creates heavy demands for services and facilities of many kinds. One unfortunate result is that the potential for conflicts is exacerbated. Those businessmen who have invested in the recreation industry must wish to pursue their completely legitimate goal of maximizing profits - which may require them to advertise widely, in the attempt to bring in as much tourist custom as possible. But the provision of services and facilities oriented mainly to out-of-province vacationists may not be in the best interests of Alberta residents, whose chief demand is for day or weekend recreation. By and large, elaborate facilities are not needed for a local market. Some facilities may have to be provided (e.g. ski tows, overnight accommodation) but not on the scale or in the variety that is needed to attract more distant visitors.

It is also worth noting that recreational expenditures within the day and weekend trip zones, though substantial, accrue largely to businessmen in the home city (e.g. purchases of equipment and supplies): expenditures at the recreational site are minimal, and are usually limited to convenience services. Moreover, on-site expenditures at large resorts experience a high rate of "leakage." Because of a high proportion of absentee owners, and the use of seasonal labour, much of the income generated by the recreational facilities is exported from the region in the form of salaries and profits. Thus, economic arguments can be misleading. Unless the recreational facilities cater to large numbers of tourists, they are not likely to have a great impact on the local economy of the recreational site. But to cater deliberately to large numbers

of out-of-province visitors, for economic reasons, may alienate resources that are important to Albertans, for non-economic reasons. The basic question is whether the Eastern Slopes region can provide for both local and non-local recreation, on the scale that will be demanded by an increasingly space-hungry population, without Albertans becoming second-class citizens in their prime recreational region.

To summarize, recreational conflicts fall into four general classes.

(i) Recreation competes with other economic activities for a share of a finite land resource. This competition is intensified in those comparatively few areas (e.g. lakeshores, ski slopes) which have the capability to attract a high intensity of recreational use. In some instances, this competition has already produced overt conflicts, most blatantly in such things as accidental forest fires. Because the Eastern Slopes region has a high recreational potential, and because there is no apparent slackening of the growth in demand for outdoor recreation space, the competition and conflicts are bound to intensify.

(ii) Some recreational uses may conflict with wildlife management and wilderness preservation, whether it be for scientific or recreational purposes. For many people, the primary reason for visiting wilderness is to obtain a special type of recreational experience, be it nature study, or hunting or fishing, or hiking or trail-riding. Again, there are some blatant conflicts. Poorly regulated hunting can limit the opportunity for wildlife observation. The ready availability of all-terrain vehicles extends the potential range of penetration into the

back-country Eastern Slopes, thus limiting the chance for solitude, or a high-quality trip for those who prefer to travel by foot or horse. The seasonal distribution of use has also been transformed, by the snow-mobile. If unrestrained access continues to be permitted to all areas of de facto wilderness, wildlife disturbance must inevitably increase, through increased hunting pressure and through harassment, whether deliberate or unintentional (e.g. because of noise).

(iii) There is already competition, and increasingly there will be conflict between local and non-local recreation demands. To a large extent, this competition is expressed in the distinction between commercial and public facilities. It takes two forms: the danger that prime sites will be pre-empted for commercial developments, and will thus become alienated as far as most Albertans are concerned; and the additional contribution to the down-grading of the recreational experience, through congestion and environmental degradation. The growing competition for space is now becoming very plain, in the commercial proposals which have been received by the Environment Conservation Authority and in the various lobbies for new provincial parks (e.g. at Kakwa Falls-Two Lakes, the Clearwater River and the Crowsnest Pass) or wildland recreation areas.

(iv) Recreation creates its own internal conflicts, particularly through overuse of resources and facilities. Some recreational activities are also incompatible with each other: snowmobiling and cross-country skiing, for instance, or power-boating and swimming, cannot share the same space. And, as a final example, there is the conflict between the solitary and the gregarious types of recreationists. A great deal of the charm of

the Eastern Slopes, under present conditions, is that solitude can still be enjoyed through much of its area. But other recreational demands, as well as the non-recreational ones, are increasingly importunate. In future, the luxury of solitude may be possible only in the designated wildernesses, and the numbers of people who can be permitted to enjoy this luxury will have to be stringently controlled, if the wildernesses are not to lose their essential purpose.

#### SOME CONCLUSIONS AND RECOMMENDATIONS

It is not pretended that this report contains a complete and detailed inventory of resource development and land use conflicts in the Eastern Slopes region. Nonetheless, it is clear that many conflicts do occur already. Some are potentially very serious, as the competing pressures on this valued area increase. The Eastern Slopes region is very important to Albertans in many ways; it contributes much to the satisfaction of economic, social, personal, and aesthetic needs of many kinds. In the space-hungry world of the future, the variety and intensity of the demands on its fixed resources may well assume crisis proportions. Many different human activities can logically claim a place here, and legitimately expect to be accommodated. It would be unrealistic, for example, to expect the foothills to become one huge playground for urban Alberta, though the case could undoubtedly be argued. Careful judgments will have to be made among the alternative, competing users. Priorities will have to be established, clearly and fairly, and then adhered to in planning and management decisions. The principles and concepts set out in the opening section of this report will have to become paramount. Above all,

it will have to be accepted, and be seen to be accepted, that the long-term interests, wants and needs of Albertans are of first priority.

This is not to suggest that there has not been a great deal of governmental energy, enthusiasm and expertise devoted to the region already. On the contrary, government's concern for the management of the region's resources has resulted in a plethora of legislation, regulations, agreements, licenses and permits. Some of these controls are excellent; others can be criticized in various ways. The more critical problem, though, is the complete failure to integrate all these controls into a cohesive and comprehensive policy for the whole region. They stand, at the moment, as a bewildering fragmented array, each developed in isolation from all the others. If this procedure is followed for much longer, the long-term prospects for wise planning and management of the total region for all Albertans will be seriously undermined. An eminent geographer, Sir Dudley Stamp, once defined planning in a way which cut to the heart of the Eastern Slopes issue: "land planning," he wrote, "is the right and balanced allocation of land between rival claimants.... The planner's task is to determine the optimum use, in the national interest, of every acre of the surface." It is precisely this dimension of planning which is missing in the Eastern Slopes - the dimension of determining which, among a variety of competing uses, represents the optimum use. By and large, in the past, these choices have not been needed. Now, however, they are imperative.

In conclusion, four broad recommendations are advanced.

(i) A holistic approach must be taken to the future management of the Eastern Slopes. That is, plans must be developed for the total region,



in all its dimensions. At present, many different governmental agencies have some responsibility in the region, but no agency is serving in an effective co-ordinating capacity. As just one example, the staff of the Multiple Use Planning Section of the Alberta Forest Service have prepared a map of all the leases which are currently held in the Eastern Slopes. This summarizes the jurisdictional overlaps and land use conflicts which are bedevilling the region. It is urged that this map be made available to the Environment Conservation Authority.

(ii) Because the Eastern Slopes region is still largely owned by the provincial government, there is an unrivalled opportunity for effective long-term planning in the public interest. There is also an unrivalled opportunity for completely open planning, not just in the sense of full and free public participation in the planning process, but also to ensure that management decisions are exposed to public scrutiny at all stages. One preliminary step is strongly urged. Many present officials are intimately acquainted with the Eastern Slopes region, and the policies and regulations which apply to it. It is essential that they have the opportunity to speak freely at the public hearings.

(iii) Many past management decisions, if not all of them, have been made with inadequate scientific information on the probable environmental consequences. There are signs that this attitude is breaking down (e.g. in the freeze on surface development in the Willmore Wilderness Provincial Park), but there can be no excuse for allowing it to continue at all. Planning and management decisions should be preceded by

thorough environmental analyses. The effects of the decisions should also be monitored closely to provide scientific feedback for further decision-making. The impact of strip-mining at Grande Cache on sheep and goat behaviour is a case in point.

(iv) A land use zoning plan should be developed for the whole Eastern Slopes region, as a first priority. At a general level, this could set out the broad categories of use which would be permitted over large areas. For example, there could be primary industry zones, grazing zones, recreation zones, wilderness zones and, possibly, mixed zones, where two or more of the general use categories could be accommodated. In many areas, more than one use may be possible, but in some (e.g. a strip mining area or a wilderness set aside for scientific purposes) multiple use would not be possible or acceptable. At a larger scale, treating sub-units within the region, more detailed zoning could be provided for smaller land units. For example, the exact extent of an approved coal-mining zone could be designated, and precise recreational sites could be identified, classified according to their most appropriate uses. The planning process, of course, would have to include a mechanism for continuous appraisal and feedback, to accommodate new needs and the experience of working with the zoning plan.

APPENDIX I - PUBLIC AND PRIVATE AGENCIES FROM WHICH INFORMATION WAS OBTAINED

Alberta Fish and Game Association  
 Alberta Forest Service  
 Alberta Snowmobile Association  
 Alberta Wilderness Association  
 Canadian Wildlife Service  
 Canadian Youth Hostel Association  
 Canfor Lumber Company, Grande Prairie  
 Chamber of Commerce, Red Deer  
 Coleman Collieries, Coleman  
 Community Services, Grande Cache  
 Crowsnest Pass Tourist Association  
 Department of Agriculture, Province of Alberta  
 Department of Fish and Wildlife, Province of Alberta  
 Department of Lands and Forests, Province of Alberta  
 Department of Mines and Minerals, Province of Alberta  
 4-H Club  
 Government of Canada Research Station, Lethbridge  
 Grande Prairie Regional Co-ordinating Authority  
 Imperial Lumber, Grande Prairie  
 North West Pulp and Power Company, Hinton  
 Oldman River Regional Planning Commission  
 Peace River Regional Planning Commission  
 Proctor and Gamble Company of Canada  
 Provincial Park Committee of Crowsnest Pass  
 Red Deer Regional Planning Commission  
 Research Council of Alberta  
 Swan City Snowmobile Club  
 Travel and Convention Association of Alberta  
 Trumpeter Swan Trailer Club  
 Unifarm  
 Western Stock Growers Association  
 Wild Kakwa Group, Grande Prairie

APPENDIX IIBIBLIOGRAPHY

- Christmas P., Latour B. "Preliminary Estimate of Measured Coal Resources Including Reassessment of Indicated and Inferred Resources in Western Canada," Geological Survey of Canada, Department of Energy, Mines and Resources, Paper 70-58, 1970.
- Crossby, D.I. "The Integration of Forest Land Uses," Forestry Chronicle 38 (1): 86-93, 1951.
- Fellows, E.S. "Multiple Forest Use and its Application on the Rocky Mountain Forest Reserve," Forestry Chronicle 28 (1): 33-44, 1952.
- Foster, B. "Discussion Paper for the Environment Conservation Authority," unpublished document, Peace River Regional Planning Commission, 1973.
- Hanson, W.R. "Grazing Use of Forest Lands," Forestry Chronicle 28 (1): 23-32, 1952.
- \_\_\_\_\_ Impact on the Environment of Timber Production and Processing in Alberta, Environment Conservation Authority, Edmonton, 1973.
- Nalback, J.A. Multiple Resource Management Guide for the Crown Lands of Alberta, unpublished document, Government of Alberta, 1971.
- Nowicki, J.J. "Multiple Use Management as it should be in Alberta," paper presented to the National and Provincial Parks Association of Canada, Edmonton, 1972.

- Pattison, W. "Demand for Fish and Wildlife Resources in the Foothills Study Area," Resource Economics Branch, Alberta Department of Agriculture, 1972.
- Peace River Regional Planning Commission People of the Peace, Their Goals and Objectives, Grande Prairie, 1972.
- Provincial Park Committee of the Crowsnest Pass "Proposal for a Provincial Park and Limited Access Area in the Crowsnest Pass," unpublished document, 1973.
- Red Deer Regional Planning Commission Land Use and Resource Development in the Eastern Slopes, North Saskatchewan and Red Deer Basins, Red Deer, 1973.
- Research Council of Alberta "Proceedings on the First Geological Conference on Western Canadian Coal," Series No. 60, Edmonton.
- Tough, G.W. "Public Policy and Coal Mining, Cascade Coal Area, Alberta," unpublished M.A. thesis, University of Calgary, Department of Geography, 1968.
- Tunstall, G. "Watershed Management by the Eastern Rockies Forest Conservation Board," Forestry Chronicle 38 (1): 89-93, 1962.
- Forest Management agreement with the Proctor and Gamble Company of Canada, under The Forests Act, 1961. Extract from the Alberta Gazette, January 15, 1969.

APPENDIX III - GOVERNMENT OF THE PROVINCE OF ALBERTA, ACTS AND REGULATIONS  
WITH SOME APPLICATION TO THE EASTERN SLOPES REGION

Clean Water Amendments Act, 1972  
Coal Mines Regulations Act, 1955  
Department of the Environment Act, 1971  
Department of Highways and Transport Act, 1965, as amended in 1969  
Eastern Rockies Forest Conservation Agreement Amendment Act, 1957  
Energy Resources Conservation Act, 1971  
Environment Conservation Act, 1970  
Environment Conservation Authority Act, 1972  
Expropriation Procedure Act, 1972  
Forest Acts, 1961, with amendments to 1967  
Forest and Prairie Protection Act, 1971  
Forest Reserves Act, 1964  
Ground Water Control Act, 1953  
Hydro and Electric Energy Act, 1971  
Land Surface Conservation and Reclamation Act (Date of Proclamation to be set)  
Mines and Minerals Act, 1962, as amended in 1968  
Oil and Gas Conservation Act, 1969  
Pipe Line Act, 1958  
Provincial Park Lands Act, 1964, as amended in 1972  
Public Highway Development Act, 1966  
Public Lands Act, 1966, as amended in 1963, 1970 and 1971  
Quarries Regulation Act, 1950  
Right of Entry Arbitration Act, 1955, as amended in 1968  
Water Resources Act, 1970, as amended in 1972  
Wilderness Areas Act, 1970, as amended in 1972  
Wildlife Act, 1970, as amended in 1972  
Willmore Wilderness Park Act, 1959, as amended in 1965

## [CHAIRMAN'S COMMENT]

DR. TROST:

We were very pleased to have the cooperation of our Science Advisory Committee in the preparation of Information Bulletin No. 12, which Dr. Ironside has just summarized and placed before us. Our Science Advisory Committee consists of members from all the universities in the province as well as industry. They named an ad hoc committee to prepare a report on resource-use planning for the eastern slopes and on the problem of conflict of uses in that area.



## SOME ASPECTS OF COAL IN ALBERTA

L. V. Hills

Private Submission

I would like to take this opportunity to expand on data contained in "The Resources of the Foothills," Alberta Lands and Forests and Environment. This document contains basic information on big game (ungulates), recreation, vegetation, watershed, archaeology, oil and natural gas, and coal, and discusses briefly present land use and demand for resources in the study area. Although much basic information is conveyed, some aspects require elaboration and all need integration. Emphasis will be placed on only the coal within the foothills.

The brochure (p. 28) places the measured indicated and inferred low and medium volatile (coking or metallurgical) coal resources of the foothills belt at 28 billion tons, of which 982 million tons fall into the measured category. These figures are unquestionably derived from Latour and Christmas (1970). In addition, some 9.3 billion tons of high volatile (non coking) **bituminous coals are also recorded.** I would like to restrict my subsequent discussion to the low and medium volatile coking coals of the inner foothills.

In order to evaluate the economic significance of such deposits, the layman must know what is meant by measured, indicated and inferred coal, the ratio of strippable coal to coal which can be recovered only by underground techniques, and the recovery rate of the various mining techniques such that the true potential can be evaluated.

I would also like to address myself to the area problem (Barnes, 1971, Collins, 1971) and such comments as those of Collins (1971, p. 501).

"Quite aside from the fact that the combined area involved in the present and projected mining activities is relatively small, it is worth observing that no mining venture will intrude into a unique wildlife habitat and that no mining venture is large enough to destroy any significant segment of such animal domain as it and its surrounding area actually constitutes."

#### Reserves

Latour and Christmas (1971, p. 2) define measured or proven resources as "those for which tonnage is computed from dimensions revealed in outcrops, trenches, mine workings and drillholes. The points of observation are so closely spaced, and the thickness and extent of the coal so well defined that the computed tonnage is judged to be accurate within 20 per cent of the true tonnage. Although the spacing of the points of observation necessary to demonstrate continuity of coal differs from region to region according to the character of the coal beds, the points of observation are, in general, about half a mile apart."

Indicated or probable resources (p. 2) "are those for which tonnage is computed partly from specific measurements and partly from projection of visible data from a reasonable distance on the basis of geologic evidence. In general, the points of observation are about 1 mile apart, but they may be as much as 1-1/2 miles apart for beds of known continuity."

Inferred or possible resources: (p. 2) "are those for which quantitative estimates are based largely on broad knowledge of the geologic character of the bed or region and for which few measurements of bed thickness are available. The estimates are based primarily on an

assumed continuity in areas remote from outcrops of beds, which in areas near outcrops were used to calculate tonnage classed as measured or indicated. In general, inferred coal lies more than 2 miles from the outcrop or from points for which mining or drilling information is available."

Combined totals of this resource for the Luscar and Kootenay Formation of the inner foothills are: measured, 982,100 million tons; indicated, 19,620,200 billion tons; inferred, 7,366,500 billion tons; total, 27,986,800 billion tons (Latour and Christmas, 1971, p. 11). It should be noted at this point that seams five feet or thicker to a depth of 2500 feet were considered mineable.

Recent estimates by the Energy Resources Conservation Board (1973) have modified these figures somewhat.

Now that you have an estimate of total coal available, the mining method (surface or subsurface) and structural, purity and rank will influence the amount of coal recovered. It is estimated that about 7 per cent of the measured bituminous coal can be mined by surface methods, whereas the remaining 93 per cent will require underground methods for recovery. This is an important consideration in that approximately 80 per cent of the coal in place can be recovered by surface methods, whereas recovery drops to about 57 per cent for underground methods, and in extremely thick seams to 25 per cent. If we assume that the ratios of strippable coal to underground coal remains constant outside the area where detailed knowledge is available, then we can calculate that 1.96 billion tons may be mineable by surface methods. The remaining 26 billion tons would have to be exploited by underground mining. If we ignore for the moment structural problems and changes in coal quality

the optimum recovery would be approximately 16.8 billion tons. (i.e.  $1.96 \times 80\% + 26.0 \times 57\%$ ) or roughly 60% of the resource in place. At 10 cents/ton this would produce a royalty revenue of 1.58 billion dollars. However, with the current emphasis on surface mining, it should be pointed out that the revenue derived from this segment of the resource would be only 156.8 million dollars.

It is to be pointed out here that these are optimum figures and do not take into consideration structural complexity (faulting, folding, steep dip) and lateral changes in coal rank and purity, all of which tend to lower the recovery. In this regard the Energy Resources Conservation Board's recent estimates suggest that the anticipated overall recovery for the foothills area will be only 43 per cent as opposed to the optimum 60 per cent.

Another informative comparison is that the entire royalty revenue at 10 cents per ton for all surface mined coking coal will, if removed today, just cover the cost of the Alberta Resource Railway (137 million) plus 20 million dollars. At the present rate of loss by the ARR  $\pm$  7 million dollars per year it will exceed the royalty revenue in three years. Although this may be disclaimed as an unfair assessment, the railroad was developed to exploit the "vast untapped resources" of the area, and therefore, the cost of building and maintaining the railway should be computed against the resources of the area.

Currently, about 4.5 million tons are being mined, which result in royalty revenues of 450,000 dollars. In addition, approximately 600,000 dollars is added in the form of lease rentals (Collins, 1971). Thus provincial revenues would be in the order of 1.0 million dollars per year from this resource. This sounds like and is a large sum of

money, but is it in terms of what we have to pay in order to obtain it?

It might be informative to give examples at this point illustrating the proven coal and the calculated royalty revenue (proven reserves as given by Energy Resources Conservation Board, Reserves of Coal, Province of Alberta, 1973). (See Table 1.)

#### Destruction of Unique Environment

The problems of coal development in major watersheds have been adequately pointed out throughout the course of these hearings and those on strip mining in Alberta. It should be pointed out, however, that emphasis has been placed on the limited number of mines and areas to be developed. This type of statement is misleading in that it does not acknowledge the fact that all major drainages within the province will be influenced if all mines proceed.

A second major problem rests with the concept of "unique environment" and the statement that no single mine will intrude into or destroy such an environment. This statement may be true of a single mine but ignores the cumulative effect of many mines. As an example I would like to use sheep wintering areas in the province.

It should be pointed out that sheep require areas of little or no snow cover and adjacent rocky cliffs (escape terrain) for wintering areas. These are generally on west facing windswept slopes or south facing slopes where melting reduces snow depths. One without the other is not acceptable habitat. There are approximately 100 such areas in Alberta. Many are currently being modified and others are threatened. McIntyre #9 mine is one example where projected stripping will destroy a major wintering area (sheep and mountain caribou). The postulated

TABLE 1 - Selected Coal Areas of Alberta

Location	Initial in Place MM Tons	Produced or Lost	In Place MM Tons	Surf MM Tons	Under- ground MM Tons	Projected area acres	Royalty
Cadomin Luscar	360	78	282	92	45	8130	13.7 mil.
Kakwa	870	0	870	354	206	8330	56. mil.
Savanna Cr.	78	0		12	19	560	3.1 mil.
Smokey River	900	14	886	132	206	15,120	33.8 mil.

Data modified E.R.C.B. 73-31

Panther River - Red Deer River and Highwood River areas will potentially destroy major wintering areas. How many must we destroy before populations are reduced to the extent that their survival is threatened? In other words by indiscriminate development of strip mines we will or could create unique areas. Also inherent in this philosophy is the belief that if it is not "unique" then it should not be of major concern.

#### Area

According to Collins (1971, p. 492) some 8000 acres or 13.1 square miles have been disturbed by surface mining for coal in Alberta up to and including 1971. It has been estimated that some 50 square miles in the foothills will be affected. Currently some 600,000 acres are under coal lease in Alberta. Table 1 lists only 4 from the foothills with a total area of 50.2 square miles. Therefore, the area actually disturbed will far exceed 50 square miles.

#### New and Proposed Developments

According to Barnes (1971, p. 451) it is possible that by 1978, 4 or 5 additional large mines may come into being. Included within this projection are the Highwood River and the Panther River areas. Both of these would require railways. The Highwood development alone would require 50 to 60 miles at an estimated cost of 200,000 to 500,000 dollars per mile, i.e. 10 to 30 million dollars. It is estimated that this development would produce 200,000 tons per annum or 200,000 dollars in royalty revenue - a small return on a 10 - 30 million dollar investment. Both would require major townsite developments within the forest reserve, as at least 250 to 300 workmen would be required for each of



the developments.

#### Employment

Employment in the coal industry has been unstable for a number of years. In 1970 there were approximately 2300 people employed. By 1972 this had decreased to 1900 with major layoffs at McIntyre (ca. 160) and Canmore. Both were dependent on Japanese contract (i.e. export). This has happened in spite of forecasts of high employment (ca. 5000 by 1978) and the labour intensive character of mining.

Unless problems related to mining and transportation are solved, and reasonable prices are obtained for the coal, one can anticipate continued fluctuations in employment within the "export" sector of this type of mining.

Surface mining techniques, although a partial solution to the underproduction problem, are machine intensive and are potentially more hazardous to the environment than underground operations.

#### Summary

Several additional lines of reasoning regarding strip mining for coking coal, i.e. job security, number of jobs created, value of coal for internal consumption as opposed to coal for export could be developed. However, time and money do not permit an individual to develop this. Furthermore, this is government responsibility.

I would like to leave you with the following questions.

1. Is strip mining for coking coal in the foothills going to pay for the facilities required to develop it?
2. What environmental considerations are actually being taken into

account?

3. Is the Kananaskis road being developed as an alternate to the railroad implied by Barnes (1971)?
4. Has a cost benefit analysis on strip mining for coking coal been conducted?
5. What are the coal resources of the foothills?

#### Recommendations

1. Moratorium be declared on new mine developments.
2. No new mine development be permitted where it is liable to conflict with overwintering areas of large ungulates.
3. Intensive and continued studies be conducted on the effects of strip mining on the flora and fauna of currently operating mines. This study should involve changes in the vegetation and the quality and quantity of the fauna throughout the history of the mine as this information is vital should we need to recover coking coal for domestic use at some point in the future. It should be pointed out that McIntyre has initiated such studies in the area of their No. 9 mine. The extent and duration is unknown to me.
4. Civil Servants be allowed to speak out at these hearings. The public has been deprived of some of the best knowledge pertaining to all aspects of this area by the decision not to allow them to speak on what at best can be considered an attempt not to "influence" public opinion.
5. The subdivision of the eastern slopes into various geographic areas be abandoned and replaced with groups reflecting the various resources of the area with wide representation from throughout the area.
6. Resource recovery be closely monitored. Mining should not be

permitted which allows wastage of major portions of the resource because it is thermal coal as opposed to coking coal.

7. Federal and Provincial governments use some standards for calculating resources.

8. Distinction be made between mines developed for export purposes and those for internal consumption. Coal for export will have far less beneficial effect on the economy as compared to thermal power generation or to petrochemical developments.

9. No mine be permitted to start production as an underground operation and then shift to a surface operation.

REFERENCES

- Barnes, B., 1971, Submission by the Coal Association of Canada to the Hearings on Surface Mining in Alberta: Environment Conservation Authority, The Impact on the Environment of Surface Mining In Alberta Proceedings of the Public Hearings Pt. II, P. 447-469.
- Collins, F. A., 1971, The Environmental Impact of Surface Mining In Alberta: Environment Conservation Authority, The Impact On the Environment of Surface Mining in Alberta Proceedings of the Public Hearings, Pt. II, P. 481-526.
- Energy Resources Conservation Board, 1972, Reserves of Coal, Province of Alberta: ERCB-73-31.
- Latour, B. A., and Christmas, L. P., 1970, Preliminary estimate of measured coal resources including reassessment of indicated and inferred resources in Western Canada: Geol. Surv. Can. Pap. 70-58.

## Recent references from CIMM Bulletin pertaining to the Coal Industry

- Bates, D.V., 1971, The Air Environment and Our Health; The Canadian Mining and Metallurgical (CIM) Bulletin for August, 1971.
- Berkowitz, N., 1970, Coal Research and Development in Canada - 1969; The Canadian Mining and Metallurgical (CIM) Bulletin for October 1970.
- Boyle, R.W., 1971, The Land Environment; The Canadian Mining and Metallurgical (CIM) Bulletin for August, 1971.
- Brown, Alex, 1972, The Sydney Coal Field - A Potentially Valuable Resource; CIM Transactions: Vol. LXXXV, pp. 251-256.
- Burgess, K.I. Incullet, I. and Bergougnou, M.A., Electrostatic Beneficiation of Coal in Fluidized Beds; The Canadian Mining and Metallurgical (CIM) Bulletin for March 1970.
- Calder, Peter N., Slope Stability in Jointed Rock; CIM Transactions: Vol. LXXIII, pp. 132-136, 1970.
- Chamberlin, J.H.H., An Approach to Steep Seam Mining; CIM Transactions: Vol. LXXV, pp. 309-317, 1972.
- Chambers, R.H. and Alderman, L., Design and Commissioning of Commercial Coal Preheating Plants; The Canadian Mining and Metallurgical (CIM) Bulletin for February, 1972.
- Coats, D.F., Cochrane, T.S., Ellie, G., Three Mining Methods for Vertical, Inclined and Thick Coal Seams Used in France; CIM Transactions: Vol. LXXV, pp. 96-102, 1972.
- Cochrane, T.S., Underground Mining of Thick Coal Seams, CIM Transactions: Vol. LXXV, pp. 160-170, 1972.
- Hambleton, G.C., Reclamation from Coal Mine Waste Dumps, CIM Transactions: Vol. LXXV, pp. 103-108, 1972.
- Hockin, L.E., The British Approach to the Control of Industrial Emissions to the Atmosphere; The Canadian Mining and Metallurgical (CIM) Bulletin for August, 1971.
- Johnson, Vard H., The Geologic Environment of Coking Coal of Western North America with Emphasis on the Canadian Scene; The Canadian Mining and Metallurgical Bulletin (CIM) for July, 1972.
- McLaren, D.J., Energy Versus Environment - The Arctic Dilemma; The Canadian Mining and Metallurgical (CIM) Bulletin for August, 1971.
- Mel'Nikov, N.V., The Role of Coal in the Energy Fuel Resources in the U.S.S.R.; CIM Transactions: Vol. LXXV, pp. 103-108, 1972.

- Prince, A.T., The Water Environment; The Canadian Mining and Metallurgical (CIM) Bulletin for August, 1971.
- Reeves, D.R., In-situ Analysis of Coal by Borehole Logging Techniques; CIM Transactions: Vol. LXXIV, pp. 61-69, 1971.
- Rosenkranz, F. Daniel and Silveston, Peter L., Use of Coal for Treatment of a Pulping Waste; The Canadian Mining and Metallurgical (CIM) Bulletin for July 1970.
- Stephenson, H.G., Gregory, C.W., Riva, W.J., Pillar Extraction in Thick Coal at Canmore, Alberta, on Gradients Between 5 and 30 Degrees; The Canadian Mining and Metallurgical (CIM) Bulletin for November, 1972.
- Shannon, Earl and Silveston, Peter, Application of Coal and Sewage Treatment; The Canadian Mining and Metallurgical (CIM) Bulletin for July, 1970.
- Sullivan, J.L., The Fragile Environment; The Canadian Mining and Metallurgical (CIM) Bulletin for August, 1971.
- Tibbets, T.E., Coal Research and Development in Canada; The Canadian Mining and Metallurgical Bulletin (CIM) for December, 1971.
- Winthrop, S.O., Canada's Clean Air Act; The Canadian Mining and Metallurgical (CIM) Bulletin for August, 1971.
- Wright, P.L., Layout of Continuous Miner Operations in the Smoky River Mines; The Canadian Mining and Metallurgical Bulletin (CIM) for March, 1973.
- Zorychta, H., Developments in Coal Mining - 1969, The Canadian Mining and Metallurgical (CIM) Bulletin for October 1970.
- Zorychta, H., Developments in Coal Mining - 1970; The Canadian Mining and Metallurgical (CIM) Bulletin for October, 1971.

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

Does it become any less possible to mine underground after surface mining operations have been carried out?

DR. HILLS:

No, not after surface mining operations have been carried out.

MR. KINISKY:

Would this have any effect on their ability to mine underground?

DR. HILLS:

Not unless the underground mine that was being developed was a few feet under the pit mines. I don't think this would have an effect on underground mining.

MR. KINISKY:

In the process of recovering coking coal I have suggested that there may be a fair amount of thermal coal which is virtually wasted because it doesn't become a part of the coking coal for export. Is it true there is some that's available that is being wasted?

DR. HILLS:

The optimum estimated underground recovery is 60 per cent. The recent Energy Resources Conservation Board report places the recovery at 43 per cent. A lot of this is lost in underground operations because of structural complexities and impurities within the coal. It's my understanding that in areas where the coking coal is being mined there are significant quantities of thermal coal which cannot be economically mined at this time and are being left. This applies specifically to the McIntyre underground operation. They are leaving high volatile or non-coking coal underground in a situation where it cannot be recovered or brought to the surface. It can be potentially recovered in the future by underground combustion techniques but it can't be brought to the surface.

MR. KINISKY:

Coal industry briefs talk about multiplier effects which range all the way from 2 to 1 in some instances to 10 to 1 in others. What is the multiplier effect per job at the minesite?

DR. HILLS:

That is something I would like to see documented. One of the recommendations which I have in my brief is that the government undertake a cost benefit analysis of the coal mining operations to see what the spin-off effect is. I think most people are currently accepting a figure in the order of 3 to 1; for every one job in the mining operation there are three in support industries. I think this year there are roughly 1,900 employed directly in the coal industry. So we are looking at something in the order of 6,000 to 7,000 people out of 620,000 people working in the province.



MR. DOWLING:

One mining company indicated that the market may only last for a given period of time. Are we now in the position that we have to flog coal in one heck of a hurry before the market collapses and it has no future use?

DR. HILLS:

I think with improved technology we will find more and more uses for coking coal so I'm not personally concerned about having it in the ground. I think of it as money in the bank, but I have no basis for saying that 20 years from now we will be able to sell coking coal in the steel industry. I would suspect that we would be able to sell it for other purposes if we wanted to.

DR. TROST:

I'm interested to see the quantities of coal that you list still in place compared to Cadomin, Kakwa, Savanna Creek and Smoky River, particularly the large amounts you indicate at Kakwa, 870 million tons, and Smoky River with 886 million. You indicate millions of tons can be obtained by surface mining techniques and by underground approaches. I notice that you are indicating quite a percentage can be won by the surface mining approach in each case.

DR. HILLS:

In the case of the Cadomin-Luscar 360 are in place, 92 of which can be recovered by surface mining. This data comes directly from the Energy Resources Conservation Board report published in January. The relatively high percentage, 92 as opposed to 45, to be obtained by underground techniques reflects the fact that these properties had been selected for their strip mining potential as opposed to their underground potential.

DR. TROST:

The sum of the surface reclaimable coal and that to be won by underground mining approaches doesn't add up to the amount that's in place. Just a limited number of sites are given priority in the mining sequence. It doesn't indicate all the coal that could be mined. Is that your explanation of the fact that the sum of surface and underground doesn't add up to the number in place?

DR. HILLS:

The number of tons in place is what, in this case, we'd call the proven resource. Using stripping techniques only about 80 per cent is recoverable. You lose 20 per cent. With underground mining techniques the most you can recover is 57 per cent so you lose 43 per cent. The two columns of the table, the surface and the underground, total 137 million tons. That is what we will recover from the 360 million tons that are there.

DR. TROST:

So it is a total treatment, and the difference is lost coal?

DR. HILLS:

Yes.

DR. TROST:

In the final column of that table you indicate a projected area in acres. Is this the projected area which will be disturbed by mining alone?

DR. HILLS:

Yes, that is how I have interpreted it.

DR. TROST:

So this would presumably be assigned largely to the surface mining rather than the underground mining?

DR. HILLS:

Yes, except that in the underground mining, if they do have spoil heaps this will influence areas outside the mine proper.

DR. TROST:

Does it include the acreage that might be covered by the washing plant, the loading facilities, exploration and so on?

DR. HILLS:

The data is not specific, but in general the comments have been related directly to the area involved in mining. So it would potentially exclude some of the facilities.

LAND USE AND RESOURCE DEVELOPMENT  
IN THE  
EASTERN SLOPES

Presented to the  
ENVIRONMENT CONSERVATION AUTHORITY

By ,

Paul L. Morck  
2022 Galloway Place  
Sherwood Park, Alberta

EASTERN SLOPES PLAYGROUND

With the increase in our leisure time, man is spending many hours enjoying the outdoors. As our National Parks are used to their fullest extent and pressures continue to overtax these areas the overflow for the parks and cities will be turning to the Eastern Slopes of the Canadian Rockies for outdoor recreation.

The prime use of the Eastern Slopes is watershed conservation as clean water is priceless. With proper watershed management we derive many benefits.

Outdoor Recreation

The greatest benefit is outdoor recreation for with clean water we will have quality fishing streams. Outdoor recreation fishing has become very popular. In the 1967-68 season the Government of Alberta sold 136,840 fishing licences and in the 1971-72 season sold 159,934. As the average number of days spent fishing by the active fisherman is in the neighbourhood of 15 this represents the total of 2,399,000 angling days.

Good watershed management creates good game habitat for ungulates as well as non-ungulates. Provincial licence sales for the sport of hunting in the season of 1968-69 were 119,978 and in 1971-72 were 132,451. Many of these licence holders will pursue their outdoor recreation in the Eastern Slopes of the Rockies. The result is that this area has become prime real estate.

On the weekends there is a mass exodus from the cities to the mountain and foothill regions in pursuit of camping, hiking and other related activities.

### Resource Development

As watershed management is the prime objective of the Eastern Slopes, all other concerns should take a very distant back seat. Just because the Eastern Slopes are sitting over a supply of 800 years of coal this is no reason for us to dig up every mountain or disturb the drainage basins for the sake of this energy and the few dollars it will turn into the Alberta economy. When it comes to non-renewable resource extraction of gas, oil, coal and other mining, development should be restricted along the three major travel corridors through the Eastern Slopes. This will keep development and transport in an orderly fashion. Renewable resource development should be done on a very rigid and controlled basis. As lumbering is a major renewable resource, extreme care should be taken to ensure that watershed and game habitat protection are given first consideration in the extraction of this resource.

### Industrial Development

Industrial development in the past has opened up the Eastern Slopes with roads and seismic lines which have had a great tendency to put undue pressures on certain areas. It would be good management to stop this trend and in fact, destroy many of the existing access roads. The building of roads and seismic lines

has caused and will continue to cause erosion which has, in many cases, destroyed quality streams and rivers.

The development of dams and water impoundments in the Eastern Slopes should be stopped as dams are primarily built with the single purpose of power generation. "Turn out the lights; in the silence of your darkened home you will hear a thousand rivers whispering their thanks!"

#### Grazing

When visiting the Eastern Slopes the outdoor recreationist does not like to see the destruction caused by cattle grazing. As the cattle have a tendency to stay in the river valley bottoms and not in the high country, they destroy winter game range, break down the banks of creeks and leave their excrement where the recreationist likes to go. The cattle which are presently in the Eastern Slopes should be completely removed to feedlots and pasture lands outside this area to provide employment for marginal farmers and others. The few ranchers that graze in the forest reserve of the Eastern Slopes should be prevented from fattening their cattle at minimum cost at the expense of the citizens of Alberta.

#### Tourist Facilities

The development of fishing and hunting lodges, hotel and motel complexes, ski resorts and similar types of accommodation should not be allowed as all they do is move the cities and towns to a different area.

Leases

Crown land in the Eastern Slopes should not be leased for any type of development; in fact, past leases should be bought back or allowed to expire.

SUMMARY

The forementioned are some of my reasons why I would like to see the Eastern Slopes remain untouched. People travel to the Eastern Slopes to get away from the urban every day way of life. Continual erosion of the Eastern Slopes by many factors such as the Chief Smallboy band of Indians, Cline River development, development of Ya Ha Tinda, coal mining and many others will eventually make the Eastern Slopes a place that no one will want to visit.

Since the Eastern Slopes are Crown land and are owned by the citizens of Alberta the land should be managed for watershed conservation and outdoor recreation allowing each person to choose his own wilderness activity. If we don't protect the area now, we will say "I looked around and then it was gone."



LAND USE AND RESOURCE DEVELOPMENT IN THE  
EASTERN SLOPES

Brief Presented by: GORDON PEEL

I wish to commend the Government of Alberta and the Environment Conservation Authority for holding this series of hearings to allow Alberta citizens to present their views of future plans for the eastern slopes.

I have noted statements in the press attributed to Members of the Authority, and these statements seem to indicate that the hearings may not result in any firm conclusions being drawn. It is reported that only two views are being heard and these are the extremist views of the developer on one hand and the opposite extreme of the environmentalist on the other. There are few if any fence sitters that are concerned in the future of the eastern slopes. If the authority cannot draw conclusions from these hearings, it will be because they will not realize that Mister Average Citizen is here and expressing his views.

These hearings are 20 years too late, but better late than never. If we were able to put together a map of the eastern slopes and draw in the varying existing developments and leases, we would realize we are not talking about vast uncharted areas, but what we are talking about is a vast network of overlapping potential development areas. Leases have been allotted over the years with no overall plan. Few, if any, regulations have existed to control the type or scope of development. The rules of the development game have been made as the game develops, not before it starts! Or, controls are suggested that might make the operation economically unsound, so the controls have been watered down.

Yesterday an announcement was made of a new Surface Control Law and it was indicated that regulations were being prepared under the Act to place greater emphasis on land surface disturbances particularly in Oil Sand excavation, strip mining and pipeline developments. This is encouraging, but how broad are these regulations?

I speak at these hearings as one who for many years has voiced a concern about this haphazard, unco-ordinated developments and use of our eastern slopes:

1. The Construction of the Alberta Resources Railroad;
2. The Athabasca, Swan Hills and a dozen other oil spills, and now one in a National Park;
3. The Coal Industry & Exploration and Development;
4. Damn Dam Building to create power and allow us to continue to pollute Saskatchewan;
5. Cattle Grazing in the Forest Reserves;
6. Forest Products Extraction
7. Roads and Railroads have been built--the pipelines laid, the mines opened, the cattle grazed, the timber cut, the dams built and sit back and look at the result and then START to make plans and regulations!

All developments over a good many years have been looked at individually and at no time have the overall aspects been properly considered. The recreational aspects have in the past been almost completely ignored.

Now we hear grandiose plans to develop a recreational Utopia on the eastern slopes! We hear schemes calling for 50-year leases in order that the development may receive a proper economic return. Some of these plans make the Village Lake Louise proposal sound small time! At least the Village Lake Louise proponents used the term "village". Now we hear of Recreational Cities. The economics of such vast proposals would seem to require 100% year round occupancy and the land demands to accommodate such masses of people would soon increase until complete areas would be destroyed by overuse.

Few of any of these new developments have considered the use of townsites that already exist in or near the eastern slopes. Have

they considered the existing east west transportation routes or are we to consider vast new networks of roads to these new concrete jungles?

Most of the new proposed recreational developments seem to be motel hotel type accommodation. Where are the proposals to accommodate the thousands of Alberta tenters and recreational vehicle owners. The production and supply of these types of units in Alberta is big business and an economic boon to many.

Let us realize once and for all, that if we are to consider the economics of the recreational dollar that is spent in Alberta, we should realize that the largest percentage of these dollars is spent by Albertans travelling in Alberta. Let's not continually cater to the out-of-province tourist. Let us realize that in the long term, Albertans spend more time and money in Alberta than short-term tourists.

We already know that Albertans out for a weekend's enjoyment in the summer find it almost impossible to reach the gates of our National Parks in time to find a place to park. Let's not make the same mistake in any development of our eastern slopes and find we have no place to park, to fish or to hunt. Yes, I speak mainly as a fisherman and a hunter and I believe we in the long term are most aware of what we have lost and have still to lose.

Most people visiting the eastern slopes go there to see scenery and wildlife, to hike, to fish and to hunt. Industrial development has already destroyed wildlife ranges and let us realize that only 10% of our total eastern slopes support wildlife and what was 10% of the total 20 years ago is now closer to 5% of the original total area. If we are to retain wildlife including wild fish and big game we must protect these critical areas, and a large percentage of these areas is in the valleys where the streams and rivers flow. Where do most of our road-buildings and developers want to expand--in our valley bottoms. Each developer points out the small area his particular development takes out of the total, but 100 'one percents' result in the total area occupied.

The Forest Act has in the past spared us settlement in the Forests Reserves. But industrial development has changed that and settlements in permanent townsites has started, let's not make the mistake of increasing this trend. Let us keep permanent settlements, including recreational cities, outside the forest reserves!

We have another situation that has developed in the Forest Reserve, and I believe this may contravene the Forest Act. A group of Indian people under Chief Smallboy moved off the Hobbema Reservation and have lived in the Forest Reserve for the past few years. This group have chosen to return to the old Indian ways and we might say have returned to nature. This may be commendable and there are others among us who might choose to do likewise, but would we be allowed to take up permanent residence in the Forest Reserves?

Chief Smallboy and his band do considerable hunting to exist and I understand kill as many as two or three big game animals daily and recently are reported to have killed 11 mountain sheep from a herd that have been protected from hunters and under study by biologists for the past two years. The Smallboy band first moved to the Kootenay Plains but later moved to the Miskiki Lake area--possibly because game became depleted. It is now rumoured that they may move again to Grave Flats. All of these are or were prime big game hunting areas. In addition the original band split and the second Indian band also located twice and are currently located in the Mackinaw area.

If all Indian people in Alberta chose to return to the old ways and move to the Forest Reserves how long would the big game last for the Indian people, or anyone else.

Some of the Indian people insist that they have the right to hunt for food at all times of the year. However, I have recently read Treaty No. 7 dated 1877, and while there are other treaties that may apply, Treaty No. 7 certainly leaves considerable doubt. An extract

from Treaty No. 7 reads as follows--"And Her Majesty the Queen hereby agrees with her said Indians, that they shall have right to pursue their vocations of hunting throughout the Tract surrendered as heretofore described, subject to such regulations as may, from time to time, be made by the Government of the country." Does this mean that all Treaty Indians are not subject to any Game Act or Regulations made by Governments over the years since 1877?????? This treaty was written when weapons were not so lethal as today, wildlife was more plentiful and before it became necessary to manage or ration wildlife.

There are others in the Forest Reserves who desecrate our wildlife in and out of hunting seasons. These are those people employed in the area year round who carry rifles in private and company vehicles at all times. Much of the useless slaughter and waste of wildlife could be eliminated if their employers were asked by Government to make it contrary to company policy for their employees to carry rifles while in company vehicles and on company business. A little co-operation and enforcement by company officials could accomplish a lot.

#### RECOMMENDATIONS

1. The protection of our watershed should be the main criterion in Eastern Slopes policy. Any development or other activity that will destroy the potential of water production should not be considered.
2. The continual indiscriminate road building by all developers should be controlled and curtailed and Industrial Roads should be restored when no longer required.
3. All permanent settlement in the Forest Reserves whether industrial or recreational should be along current east west transportation corridors or in or near existing townsites.

4. That more Government campsites be developed or existing ones expanded along the main transportation routes and near suitable lakes and streams and that these campsites be supervised where feasible during peak usage periods.

4. That all developments including cattle grazing in the Forest Reserves should be removed from known critical wildlife wintering ranges.

6. That the government of Alberta in consultation with the Federal Government investigate the rights of Indians people to hunt and fish, and the governments re-negotiate with the Indian people their supposed perpetual rights in this connection. Our white forefathers also at one time hunted with little or no restrictions. Let it be clarified once and for all if Indian people are exempted from the regulations of Game Acts.

7. That where resource industries employ people travelling within the Forest Reserves, lease agreements with such companies include provisions that their employees not be allowed to carry firearms within the Forest Reserves.

8. That in future firm operating regulations be established governing any and all exploration and development leases and development leases and that these regulations be a part of the initial lease and that a suitable performance bond be obtained from all leaseholders to ensure restoration.

COPY OF TREATY  
AND  
SUPPLEMENTARY TREATY  
No. 7,  
MADE 22<sup>ND</sup> SEPT., AND 4<sup>TH</sup> DEC., 1877,  
BETWEEN  
HER MAJESTY THE QUEEN  
AND THE  
BLACKFEET  
AND  
OTHER INDIAN TRIBES,  
AT THE BLACKFOOT CROSSING OF BOW RIVER  
AND FORT MacLEOD.

*Reprinted from the Edition of 1877 by*

©  
ROGER DUHAMEL, F.R.S.C.  
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY  
OTTAWA, 1966

Cat. No.: Ci 72-0766



ORDER IN COUNCIL SETTING UP COMMISSION  
FOR TREATY No. 7

P.C. No. 650

On a Report dated 28th June 1877 from the Honourable the Minister of the Interior stating that it having been decided that a Treaty should be made this year with the Blackfeet and other Indians occupying the unceded territory North of the Boundary Line, East of the Rocky Mountains, and West and South of Treaties Nos. 4 and 6, His Honor Lieut. Governor Laird was in the early part of the year instructed to notify the Indians that Commissioners would be sent in the Fall to negotiate a Treaty with them at such time and place as His Honor might appoint for that purpose.

That His Honor has advised the Department that he has accordingly notified the Indians to assemble at Fort MacLeod on the 13th September next to meet the Commissioners to be appointed to negotiate a Treaty with them. That the necessary funds to meet the expense of the Treaty have been duly provided in the Estimates for the coming year.

That the Territory to be included in the proposed Treaty is occupied by the Blackfeet, Crees, Sarcees and Peigans and may be estimated approximately at about 35,000 Square Miles in area.

The Minister recommends that His Honor the Lieutenant Governor of the North West Territories and Lieut. Colonel James F. Macleod, C.M.G., Commissioner of the Mounted Police, be appointed Commissioners for the purpose of negotiating the proposed Treaty.

The Committee submit the foregoing recommendations for approval.

Signed: A. Mackenzie

Approved

12 July 1877

Signed: Mr. B. Richards

Deputy Governor

## ARTICLES OF A TREATY

Made and concluded this twenty-second day of September, in the year of Our Lord, one thousand eight hundred and seventy-seven, between Her Most Gracious Majesty the Queen of Great Britain and Ireland, by Her Commissioners, the Honorable David Laird, Lieutenant-Governor and Indian Superintendent of the North-West Territories, and James Farquharson MacLeod, C.M.G., Commissioner of the North-West Mounted Police, of the one part, and the Blackfeet, Blood, Piegan, Sarcee, Stony and other Indians, inhabitants of the Territory north of the United States Boundary Line, east of the central range of the Rocky Mountains, and south and west of Treaties numbers six and four, by their Head Chiefs and Minor Chiefs or Councillors, chosen as hereinafter mentioned, of the other part.

**W**HEREAS the Indians inhabiting the said Territory, have, pursuant to an appointment made by the said Commissioners, been convened at a meeting at the "Blackfoot Crossing" of the Bow River, to deliberate upon certain matters of interest to Her Most Gracious Majesty, of the one part, and the said Indians of the other;

And whereas the said Indians have been informed by Her Majesty's Commissioners that it is the desire of Her Majesty to open up for settlement, and such other purposes as to Her Majesty may seem meet, a tract of country, bounded and described as hereinafter mentioned, and to obtain the consent thereto of Her Indian subjects inhabiting the said tract, and to make a Treaty, and arrange with them, so that there may be peace and good will between them and Her Majesty, and between them and Her Majesty's other subjects; and that Her Indian people may know and feel assured of what allowance they are to count upon and receive from Her Majesty's bounty and benevolence;

And whereas the Indians of the said tract, duly convened in Council, and being requested by Her Majesty's Commissioners to present their Head Chiefs and Minor Chiefs, or Councillors, who shall be authorized, on their behalf, to conduct such negotiations and sign any Treaty to be founded thereon, and to become responsible to Her Majesty for the faithful performance, by their respective Bands of such obligations as should be assumed by them, the said Blackfeet, Blood, Piegan and Sarcee Indians have therefore acknowledged for that purpose, the several Head and Minor Chiefs, and the said Stony Indians, the Chiefs and Councillors who have subscribed hereto, that thereupon in open Council the said Commissioners received and acknowledged the Head and Minor Chiefs and the Chiefs and Councillors presented for the purpose aforesaid;

And whereas the said Commissioners have proceeded to negotiate a Treaty with the said Indians; and the same has been finally agreed upon and concluded as follows, that is to say: the Blackfeet, Blood, Piegan, Sarcee, Stony and other Indians inhabiting the district hereinafter more fully described and defined, do hereby cede, release, surrender, and yield up to the Government of Canada for Her Majesty the Queen and her successors for ever, all their rights, titles, and privileges whatsoever to the lands included within the following limits, that is to say:

Commencing at a point on the International Boundary due south of the western extremity of the Cypress Hills, thence west along the said boundary to the central range of the Rocky Mountains, or to the boundary of the Province of British Columbia, thence north-westerly along the said boundary to a point due

west of the source of the main branch of the Red Deer River, thence south-westerly and southerly following on the boundaries of the Tracts ceded by the Treaties numbered six and four to the place of commencement;

And also all their rights, titles and privileges whatsoever, to all other lands wherever situated in the North-West Territories, or in any other portion of the Dominion of Canada;

To have and to hold the same to Her Majesty the Queen and her successors for ever:—

And Her Majesty the Queen hereby agrees with her said Indians, that they shall have right to pursue their vocations of hunting throughout the Tract surrendered as heretofore described, subject to such regulations as may, from time to time, be made by the Government of the country, acting under the authority of Her Majesty and saving and excepting such Tracts as may be required or taken up from time to time for settlement, mining, trading or other purposes by Her Government of Canada; or by any of Her Majesty's subjects duly authorized therefor by the said Government.

It is also agreed between Her Majesty and Her said Indians that Reserves shall be assigned them of sufficient area to allow one square mile for each family of five persons, or in that proportion for larger and smaller families, and that said Reserves shall be located as follows, that is to say:

First.—The Reserves of the Blackfeet, Blood and Sarcée Bands of Indians, shall consist of a belt of land on the north side of the Bow and South Saskatchewan Rivers, of an average width of four miles along said rivers, down stream, commencing at a point on the Bow River twenty miles north-westerly of the Blackfoot Crossing thereof, and extending to the Red Deer River at its junction with the South Saskatchewan; also for the term of ten years, and no longer, from the date of the concluding of this Treaty, when it shall cease to be a portion of said Indian Reserves, as fully to all intents and purposes as if it had not at any time been included therein, and without any compensation to individual Indians for improvements, of a similar belt of land on the south side of the Bow and Saskatchewan Rivers of an average width of one mile along said rivers, down stream; commencing at the aforesaid point on the Bow River, and extending to a point one mile west of the coal seam on said river, about five miles below the said Blackfoot Crossing; beginning again one mile east of the said coal seam and extending to the mouth of Maple Creek at its junction with the South Saskatchewan; and beginning again at the junction of the Bow River with the latter river, and extending on both sides of the South Saskatchewan in an average width on each side thereof of one mile, along said river against the stream, to the junction of the Little Bow River with the latter river, reserving to Her Majesty, as may now or hereafter be required by Her for the use of Her Indian and other subjects, from all the Reserves hereinbefore described, the right to navigate the above mentioned rivers, to land and receive fuel cargoes on the shores and banks thereof, to build bridges and establish ferries thereon, to use the fords thereof and all the trails leading thereto, and to open such other roads through the said Reserves as may appear to Her Majesty's Government of Canada, necessary for the ordinary travel of her Indian and other subjects, due compensation being paid to individual Indians for improvements, when the same may be in any manner encroached upon by such roads.

Secondly.—That the Reserve of the Piegan Band of Indians shall be on the Old Man's River, near the foot of the Porcupine Hills, at a place called "Crow's Creek."

And, Thirdly.—The Reserve of the Stony Band of Indians shall be in the vicinity of Morleyville

In view of the satisfaction of Her Majesty with the recent general good conduct of her said Indians, and in extinguishment of all their past claims, she

hereby, through her Commissioners, agrees to make them a present payment of twelve dollars each in cash to each man, woman, and child of the families here represented.

Her Majesty also agrees that next year, and annually afterwards forever, she will cause to be paid to the said Indians, in cash, at suitable places and dates, of which the said Indians shall be duly notified, to each Chief, twenty-five dollars, each minor Chief or Councillor (not exceeding fifteen minor Chiefs to the Blackfeet and Blood Indians, and four to the Piegan and Sarcee Bands, and five Councillors to the Stony Indian Bands), fifteen dollars, and to every other Indian of whatever age, five dollars; the same, unless there be some exceptional reason, to be paid to the heads of families for those belonging thereto.

Further, Her Majesty agrees that the sum of two thousand dollars shall hereafter every year be expended in the purchase of ammunition for distribution among the said Indians; Provided that if at any future time ammunition become comparatively unnecessary for said Indians, Her Government, with the consent of said Indians, or any of the Bands thereof, may expend the proportion due to such Band otherwise for their benefit.

Further, Her Majesty agrees that each Head Chief and Minor Chief, and each Chief and Councillor duly recognized as such, shall, once in every three years, during the term of their office, receive a suitable suit of clothing, and each Head Chief and Stony Chief, in recognition of the closing of the Treaty, a suitable medal and flag, and next year, or as soon as convenient, each Head Chief, and Minor Chief, and Stony Chief shall receive a Winchester rifle.

Further, Her Majesty agrees to pay the salary of such teachers to instruct the children of said Indians as to Her Government of Canada may seem advisable, when said Indians are settled on their Reserves and shall desire teachers.

Further, Her Majesty agrees to supply each Head and Minor Chief, and each Stony Chief, for the use of their Bands, ten axes, five handsaws, five augers, one grindstone, and the necessary files and whetstones.

And further, Her Majesty agrees that the said Indians shall be supplied as soon as convenient, after any Band shall make due application therefor, with the following cattle for raising stock, that is to say: for every family of five persons, and under, two cows; for every family of more than five persons, and less than ten persons, three cows; for every family of over ten persons, four cows; and every Head and Minor Chief, and every Stony Chief, for the use of their Bands, one bull; but if any Band desire to cultivate the soil as well as raise stock, each family of such Band shall receive one cow less than the above mentioned number, and in lieu thereof, when settled on their Reserves and prepared to break up the soil, two hoes, one spade, one scythe, and two hay forks, and for every three families, one plough and one harrow, and for each Band, enough potatoes, barley, oats, and wheat (if such seeds be suited for the locality of their Reserves) to plant the land actually broken up. All the aforesaid articles to be given, once for all, for the encouragement of the practice of agriculture among the Indians.

And the undersigned Blackfeet, Blood, Piegan and Sarcee Head Chiefs and Minor Chiefs, and Stony Chiefs and Councillors on their own behalf and on behalf of all other Indians inhabiting the Tract within ceded do hereby solemnly promise and engage to strictly observe this Treaty, and also to conduct and behave themselves as good and loyal subjects of Her Majesty the Queen. They promise and engage that they will, in all respects, obey and abide by the Law, that they will maintain peace and good order between each other and between themselves and other tribes of Indians, and between themselves and others of Her Majesty's subjects, whether Indians, Half Breeds or Whites, now inhabiting, or hereafter to inhabit, any part of the said ceded tract, and that they will not molest the person or property of any inhabitant of such ceded tract, or the

property of Her Majesty the Queen, or interfere with or trouble any person, passing or travelling through the said tract or any part thereof, and that they will assist the officers of Her Majesty in bringing to justice and punishment any Indian offending against the stipulations of this Treaty, or infringing the laws in force in the country so ceded.

IN WITNESS WHEREOF HER MAJESTY'S said Commissioners, and the said Indian Head and Minor Chiefs, and Stony Chiefs and Councillors, have hereunto subscribed and set their hands, at the "Blackfoot Crossing" of the Bow River, the day and year herein first above written.

Signed by the Chiefs and Councillors within named in presence of the following witnesses, the same having been first explained by James Bird, Interpreter.

A. G. IRVINE, Ass't. Com., N.W.M.P.  
J. McDUGALL, Missionary.  
JEAN L'HEUREUX.  
W. WINDER, Inspector.  
T. N. F. CROZIER, Inspector.  
E. DALRYMPLE CLARK, Lieut. & Adjutant N.W.M.P.  
A. SHURTLIFF, Sub Inspector.  
C. E. DENING, Sub Inspector.  
W. D. AUTROBUS, Sub Inspector.  
FRANK NORMAN, Staff Constable.  
MARY J. MACLEOD  
JULIA WINDER  
JULIA SHURTLIFF  
E. HARDISTY  
A. McDUGALL.  
E. A. BARRETT.

DAVID LAIRD, Lieutenant-Governor of North-West Territories, and Special Indian Commissioner.

JAMES F. MACLEOD, Lieut.-Colonel, Com. N.W.M.P., and Special Indian Commissioner.  
CHAPO-MEXICO, or Crowfoot, his  
Head Chief of the South x  
Blackfeet. mark.

MATOSE-APIW, or Old Sun, his  
Head Chief of the North x  
Blackfeet. mark.

STAMISCOTOCAR, or Bull Head. his  
Head Chief of the Sarcees. x  
mark.

MEKASTO, or Red Crow his  
Head Chief of the South Bloods x  
mark.

CONSTANTINE SCOLLEN, Priest, witness to signatures of Stonixosak and those following.

CHARLES E. CONRAD.  
THOS J. BOGG.

NATOSE-ONISTORS, or Medicine his  
Calf x  
mark.

POKAPIW-OTOIAN, or Bad Head his  
x  
mark.

SOTENAH, or Rainy Chief, his  
Head Chief of the North x  
Bloods. mark.

TAKOYE-STAMIX, or Fiend Bull. his  
x  
mark.

AKKA-KITCIPIMIW-OTAS, or many his  
spotted horses. x  
mark.

ATTISTAH-MACAN, or Running his  
Rabbit. x  
mark.

PITAH-PEKIS, or Eagle Rib.	his x mark.	
SAKOYE-AOTAN, or Heavy Shield, Head Chief of the Middle Blackfeet.	his x mark.	
ZOATZE-TAPITAPIW, or Setting on an Eagle Tail.	his x mark.	
Head Chief of the North Piegans	his x mark.	
AKKA-MAKKOYE, or Many Swans	his x mark.	
APENAKO-SAPOP, or Morning Plume	his x mark.	
MAS-GWA-AH-SID, or Bear's Paw	his x mark.	Stony Chiefs
CHE-NE-KA, or John,	his x mark.	
KI-CHI-PWOT, or Jacob,	his x mark.	
STAMIX-OSOK, or Bull Backfat,	his x mark.	
EMITAH-APISKINNE, or White Striped Dog,	his x mark.	
MATAPI-KOMOTZIW, or the Captive or Stolen Person,	his x mark.	
APAWAWAKOSOW, or White Antelope,	his x mark.	
MAKOYE-KIN, or Wolf Collar,	his x mark.	
AYE-STIPIS-SIMAT, or Heavily Whipped,	his x mark.	
KISSOUM, or Day Light,	his x mark.	
PITAH-OTOCAN, or Eagle Head,	his x mark.	
APAW-STAMIX, or Weasel Bull,	his x mark.	
ONISTAH-POKAH, or White Calf,	his x mark.	

NETAH-KITET-PI-MEW, or Only Spot,	his x mark.
AKAK-OTOS, or Many Horses,	his x mark.
STOKIMATIS, or The Drum	his x mark.
PITAH-ANNES or Eagle Robe	his x mark.
PITAH-OTISKIN, or Eagle Shoe,	his x mark.
STAMIXO-TA-KA-PIW, or Bull Turn Round	his x mark.
MASTE-PITAH, or Crow Eagle,	his x mark.
JAMES DIXON,	his x mark.
ABRAHAM KECHEPWOT,	his x mark.
PATRICK KECHEPWOT,	his x mark.
GEORGE MOY-ANY-MEN,	his x mark.
GEORGE CRAWLOR,	his x mark.
EKAS-KINE, or Low Horn,	his x mark.
KAYO-OKOSIS, or Bear Shield,	his x mark.
PONOKAH-STAMIX, or Bull Elk,	his x mark.
OMAKSI SAPOP, or Big Plume,	his x mark.
ONISTAH, or Calf Robe,	his x mark.
PITAH-SIKSINUM, or White Eagle,	his x mark.

*Strong Councilors*



APAW-ONISTAW, or Weasel Calf,	his x mark.
ATTISTA-HAES, or Rabbit Carrier,	his x mark.
PITAH, or Eagle,	his x mark.
PITAH-ONISTAH, or Eagle White Calf,	his x mark.
KAYE-TAPO, or Going to Bear,	his x mark.

We the members of the Blackfoot tribe of Indians having had explained to us the terms of the Treaty made and concluded at the Blackfoot Crossing of the Bow River, on the twenty-second day of September, in the year of our Lord one thousand eight hundred and seventy-seven;

Between Her Majesty the Queen, by Her Commissioners duly appointed to negotiate the said Treaty and the Blackfeet, Blood, Piegan, Sarcee, Stony and other Indian inhabitants of the country within the limits defined in the said Treaty, but not having been present at the Councils at which the articles of the said Treaty were agreed upon, do now hereby, for ourselves and the Bands which we represent, in consideration of the provisions of the said Treaty being extended to us and the Bands which we represent, transfer, surrender and relinquish to Her Majesty the Queen, Her heirs and successors, to and for the use of Her Government of the Dominion of Canada, all our right, title, and interest whatsoever which we and the said Bands which we represent have held or enjoyed of in and to the territory described and fully set out in the said Treaty; also, all our right, title, and interest whatsoever to all other lands wherever situated, whether within the limits of any other Treaty heretofore made or hereafter to be made with Indians, or elsewhere in Her Majesty's territories, to have and to hold the same unto and for the use of Her Majesty the Queen, Her heirs and successors forever;

And we hereby agree to accept the several benefits, payments, and Reserves promised to the Indians under the Chiefs adhering to the said Treaty at the Blackfoot Crossing of the Bow River, and we solemnly engage to abide by, carry out and fulfil all the stipulations, obligations and conditions therein contained on the part of the Chiefs and Indians therein named, to be observed and performed and in all things to conform to the articles of the said Treaty, as if we ourselves and the Bands which we represent had been originally contracting parties thereto and had been present at the Councils held at the Blackfoot Crossing of the Bow River, and had there attached our signatures to the said Treaty.

IN WITNESS WHEREOF, James Farquharson MacLeod, C.M.G., one of Her Majesty's Commissioners appointed to negotiate the said Treaty, and the Chief of the Band, hereby giving their adhesion to the said Treaty, have hereunto subscribed and set their hands at Fort MacLeod, this fourth day of December, in the year of our Lord one thousand eight hundred and seventy-seven.

Signed by the parties hereto in the presence of the undersigned witnesses, the same having been explained to the Indians by the said James Farquharson MacLeod, one of the Commissioners appointed to negotiate the said Treaty, through the interpreter, Jerry Potts, in the presence of

JAMES F. MACLEOD, LIEUT. COL.,  
*Special Indian Commissioner.*  
 MEANXKISTOMACH his  
 of Three Bulls s  
 mark

A. G. IRVINE,  
*Assistant Commissioner.*

E. DALRYMPLÉ CLARK,  
*Lieutenant and Adjutant N.W.M.P.*

CHARLES E. CONRAD,  
 W. WINDER,  
*Inspector.*

## QUESTIONING BY THE AUTHORITY

DR. TROST:

In recent decades, what has been the trend in counts in the different wildlife species and the fish populations?

MR. PEEL:

I believe most species are declining but I wouldn't like to comment further. I would suggest this information be obtained from government sources which undertake these official counts.

DR. TROST:

Regarding Treaty No. 7, what area and bands does it cover?

MR. PEEL:

That information is appended to my brief.

DR. TROST:

We have had submissions from Indian bands. The Stoneys in particular emphasized that their treaty stated they were free to hunt on Crown lands not assigned to another use. That's why I was wondering if Treaty No. 7 covered the Stoney Indians or not.

MR. PEEL:

It includes the Blackfeet, Blood, Peigan, Sarcee, Stoney chiefs, minor chiefs and councillors.

Brief submitted by: Mr. B. Lambert  
 Tract Equipment Ltd.  
 Edmonton, Alberta

MR. LAMBERT:

I am an Albertan working for an Albertan-owned company located in Edmonton involved in the distribution of snowmobiles. Our company employs approximately 40 people and supplies some 115 dealers with machines, parts, clothing and accessories.

I would like, for the record, to clear up a point with regard to the report of harassment of animals in the State of Wisconsin in a survey of 1971. This is directly from the report from the Conference on Snowmobiles and All-terrain Vehicles, University of Western Ontario, London, Canada by Mr. Howard P. Larson, Advisory Committee for the Protection of the Environment, answerable to the President of the United States:

On June 1, 1971, the Department of Natural Resources in Wisconsin issued a report entitled Analysis of Snowmobile Impact Reports for 1970-71. This was the summation of documented reports received from 70 field personnel at the end of the winter. These reports indicated that there were two deer killed by snowmobiles, one intentional and one accidental. There was one instance of pheasants being driven out of winter cover. There were several arrests in three counties for illegal fox hunting from snow machines. There were nine instances of snowmobiles riding over and injuring planted trees, four instances of grass meadows compacted, one of an alfalfa field compacted, one of knocking down wildlife food patches, one of unauthorized trail clearing and one instance of a trail being used on bare ground.

Now this is a state that reported a use of 117,000 registered snowmobiles. The report contains the following conclusion:

Documented cases of environmental damage are so few that specific problems of importance are difficult to identify. The major problems are with people to people interreactions. No research is recommended on environmental impacts. Motivational research directed at snowmobiles could be productive but this would be in a sociological context.

We have many reports such as these and we would be pleased to supply any further details on request.

## QUESTIONING BY THE AUTHORITY

DR. TROST:

Have you any information on snowmobiling under social and climatic conditions in the eastern slopes?

MR. LAMBERT:

We would like to get this information and would be more than glad to work with governments, as other areas have done very successfully. It's unfortunate that most of the facts and university studies have come from the United States, but I'm sure that our industry and our snowmobile associations would be glad to assist in any way possible to present the facts that you request.

B R I E F  
on the  
development of the

EASTERN SLOPES OF ALBERTA

As prepared for Public Hearing  
in  
EDMONTON, ALBERTA  
on  
July 5, 1973

Presented on behalf of the  
SHERWOOD PARK FISH & GAME ASSOCIATION

\*\*\*\*\*

Presented By: Lois Brown

I. BRIEF ON NON-RENEWABLE RESOURCES

(basically strip-mining, oil & gas,  
pipelines, coal, sand & gravel,  
metallic minerals, and our  
archaeological sites.

it also includes roads, air-strips,  
bridges, industries and their  
effects on our Eastern Slopes. )



The Effects of the Development of the  
Eastern Slopes of Alberta on our  
Non-Renewable Resources.

OIL, GAS & PIPELINES:

In the past, exploration activities have destroyed large volumes of timber, disturbed watercourses, and contributed to soil erosion. Entire forests have been crisscrossed with roadways and trails which have affected the wildlife by allowing man to have easy access to large areas of land.

More restrictions are needed to minimize the effects of this exploration. Gas and Oil exploration and production should be restricted to the area that is known as the first range.

Because the area is typified by hilly country, it is highly susceptible to concentrations of the atmospheric pollutants given off by a refinery. The water must also be protected from a variety of by-products that can be highly toxic. Therefore, pipelines should be used to bring the product nearer to settlement for refinement. Water or gas injection in wells can use large volumes of water and may pollute ground water supplies. Therefore, its use should be controlled.

No single area within the study zone has escaped petroleum exploration. After exploration activities are

complete, the industry moves into the development and refining field. Pipeline work requires the clearing of timber. These pipeline corridors must be kept clear so that the lines may be maintained and checked for leaks. The danger of breaks, which may result in oil spills, can have disastrous effects upon the immediate area and widespread effects if such spills should enter the natural watercourses.

Not only do these oil spills effect the watercourses but they kill out the vegetation around it. And what happens to the wildlife in that area? Not only does it engulf the small rodents, but it can storm towards the young life of our big game animals. What happens to our deer, moose, elk, bears that sudden come upon this mass of oil? Do you think they will always be smart enough to avoid it? Could they not lose their life in it?

Oil leaks spring up all over. We have recently had one in our Jasper National Park. True, Trans Mountain has promised to clean up the mess... but how long will it take for the vegetation to grow again? How much damage has already been done to wildlife?

Exploration for petroleum products in the eastern slopes is not over. It will continue with the progress of time. We must find ways of accommodating this search while causing minimal permanent environmental damage. With the finding of more petroleum fields, it will lead to more processing and refining plants.... operations

will continue for the by-products - sulphur - fertilizers and many other plants will be constructed. We must find ways, and plan wisely for the development of these plants in this area without doing permanent damage to our environment.

#### COAL AND STRIP MINING:

A moratorium should be placed on all mineral resources exploration done by conventional roads and trails bladed by heavy machinery. Necessary coal reserve exploration should be done by helicopter and portable core drills. Not by dozing out trails above timberline to run a series of borrow pits along and across ridge tops as has been done at Nordegg and at the Spray Lakes. Exploration by heavy equipment should only be needed at the existing committed developments of Grande Cache, Luscar and Cochrane.

We believe that large areas of the mountains should be kept free of any mining activity, and that at this time mining is only acceptable along the established east-west transport corridors that are already established.

Because of the expansion factor of the overburden from strip mining, operations at Luscar have by necessity filled in watercourse valleys with excess overburden.

Watercourses should be used only as a last resort. Concrete retaining dams should be required to remove all of the fine materials in a settling pond before the water

is released into feeder streams of valuable sport fishing and gravel bed streams. It would also help to maintain the quality of the water from the Eastern Slopes.

SAND, GRAVEL, AND QUARRY ROCK:

There are extensive reserves of sand and gravel throughout the Eastern Slopes. The main use now is for road construction and upgrading of roads in the area. In the foothills area reclamation is possible and should be required in order for the area to remain as aesthetically pleasing as possible. Restrictions would be needed so that the watershed is not disrupted, and so the slopes will remain a source of clean water. Stream beds must be left alone to prevent excess sediment to be put into the water, and to maintain the streams as fish spawning areas.

Quarry rock in other than the foothills region should be limited to those areas set aside for mining in order that the areas disrupted for man made uses be kept to a minimum.

ROADS, AIR STRIPS AND BRIDGES:

Roads should be constructed with proper surfacing, drainage, and with erosion control measures taken. They should be built out of the valley bottoms, and if the ground water flow is disrupted, measures must be taken to restore that flow.

Areas should be set aside where road building should be minimal in order that the environment be left

alone as much as possible. Bridges would be necessary in order that the water flow would not be changed. Large airstrips in the areas, away from the population corridors are not necessary or desirable. In order that wildlife not be disturbed, small strips whose main purpose is fire control are only necessary.

#### METALLIC MINERALS AND ARCHAEOLOGICAL SITES:

No one can possibly imagine what lies in the Eastern Slopes in the way of metallic minerals and archaeological sites. It wasn't many years ago that a whole town was come upon-north of Banff in the mountains. Every year, explorers are finding new caves; people in general are becoming far more interested in climbing, hiking, travelling.

Our younger generation are out in the open far more, are exploring considerably, and have access to much more information - if they wish to pursue their finds. Far more grants, and in larger amounts, are being extended by the government and by private enterprises for these ventures. Our historical societies are far more active.

We should therefore be much more concerned in protecting our archaeological sites. We are a very young country. We have barely touched the surface of what may lie in our Eastern Slopes. We must be very

careful in establishing a precedent in any development or exploration of archaeological sites.

Look how many organizations have been trying to dig for dinosaur bones at Drumheller.... if it hadn't been controlled there, people would have been in with bulldozers.

One only has to sit in Banff for a week before they are well aware just how many Americans are interested in exploring the mountains for zoological and geological findings. As they are far more interested in these aspects than Canadians, and seem to have much more financial assistance for these explorations and developments than Canada on the whole, a very well planned program must be established by the Government of Alberta before it runs away from us.

As far as Metallic Minerals are concerned, explorations over the past years have not been encouraging. But we are living in a much more progressive atmosphere at the present time... and it will increase. Our younger generation are not taking "No" for an answer. They strongly believe "where there is a will, there is a way". Traces of gold and silver have been found, since the early workings in 1859 and iron deposits of sedimentary origin occur in the slopes.

But today there is the "know-how" to explore, there is far better equipment - whether in the form of a

fine tuned instrument, or a better sleeping bag to survive the cold, damp, nights of the mountain regions while one is exploring.

To date, development of the Crowsnest Pass, Pincher Creek have been steady. Day after day goes on the same... but people are finding new methods to push on with their interests, and one of these days a whole new generation will push on in - finding metallic minerals in the Eastern Slopes.

Will our Government be ready to control the development? Will the area be well planned? Will they be able to develop the area and will private companies be allowed to push forth without any thought to the destruction of the environment in our Eastern Slopes? We must never let that happen.

\*\*\*\*\*

Researched: Guy Landry  
Sherwood Park

Written: Jointly by Guy Landry  
and L. Brown.



II BRIEF ON RENEWABLE RESOURCES

- (a) The Resources of the Foothills -
- (b) The Cash Value of Big Game Animals -
- (c) Lessons from the Swan Hills

Researched, Prepared and Written

By Dave Tomlinson  
Edmonton, Alberta.

"THE RESOURCES OF THE FOOTHILLS- A Choice of Land Use Alternatives."

Before discussing the choices, it is wise to examine what choices we still have. The allocation and use of the Foothills land is subject to existing commitments, and these are heavy.

Mineral resources:

(Map 6; Page 25-26)

Indian reserves, Privately owned patented land (owners hold the mineral rights), and Wilderness Areas remove about 5% of the area.

Long term contracts, usually of 25 year term, but renewable until the resource is depleted, remove about 50% of the area.

Short term exploration contracts, convertible to long term contracts if resources are found, remove about 15% of the area.

Summing the above, we find that 70% of the area already has been committed under terms covering the mineral rights.

Renewable resources:

(Map 6; Page 25-26)

Three major forest contracts (hatched lines, Map 6) remove about 20% of the area. Such land is unsuitable for grazing leases.

Indian reserves, Privately owned patented land, and Wilderness areas remove about 5% of the area.

Other long term contracts remove about 5% of the area.

Summing the above is probably inaccurate, as the figures are estimates from the map (no positive figures are given in the text). Still, at least 30% of the area has already been committed under terms covering the renewable resources (primarily forests and grazing).

An examination of Map 6 shows yellow areas which represent uncommitted land. There is very little area that is yellow; less than 5%, probably.

We have little left to allocate.

Let us now look to Table IV, Page 37. There we find four possible mineral resources; and the following:

93% of the area contains no coal.

81% of the area contains no industrial minerals (mica, gravel, etc.).

99% of the area contains no metallic minerals (lead, copper, etc.).

61% of the area contains a low possibility of oil and gas.

With 70% of the area already committed under terms covering the rights to the above resources, I should say that it is not necessary to commit any further non-renewable resources. There are probably none left to commit.

We also find the renewable resources; and the following:

64% of the area is useless for agriculture.

31% of the area is useless for forest harvesting.

61% of the area is useless for grazing.

With over 30% of the area already committed under terms covering the rights to the above resources, I am dubious about committing any further renewable resources. My flying experience over British Columbia has clearly indicated to me that reforestation takes place rapidly and efficiently- along the edges of main highways. My travels in the southern foothills have as clearly indicated that ranchers prefer to graze their cattle on Crown leased land until nothing remains for the elk, while keeping their own grazing lands in better condition.

Let us look at the other side. Table IV says that all of this area has some watershed capability. Can we afford further commitments, in the light of the completely inadequate knowledge we have about the effects of development on watersheds? Remember, we are dealing with the entire water supply for the whole province. Virtually all our rivers come from this area.

Table IV says that all of this area has ungulate capability, most of it moderate to excellent. We tend to regard game animals as valueless, but this is not true. We tend to regard them as uncontrolled and uncontrollable, and this is not true. Our Alberta Fish and Wildlife division of the provincial government manages the herds of game as carefully as any rancher manages his cattle; the herds are kept to suitable size for the food supply of the area they inhabit. If more grazing lands were allocated to elk instead of cattle; if cattle were taken off Crown grazing lands before they finished the grass and got into the brush, eating the deer and moose food; if some thought were given to adding to game herds, we could have more big game animals. But why?

Tourists like to look at and photograph large and small animals. They like wilderness areas, sport fishing, and quiet. A tourist brings money that wasn't in Alberta, and he leaves it here. He pays for gas, oil, accomodation, guides (usually from our rural poor), food, and many other things. He makes no profit

in Alberta, and he takes away nothing but film and memories. This, clearly, is the best source of cash returns from the Foothills area.

We are many years behind Europe in our control of wilderness. We should be learning from them how to preserve and protect what wilderness we have left. The idea that we have too much wilderness is foolish; by having much of it, we have the capability of attracting many tourists, and entertaining them without overcrowding. However, tourist development on a large scale carries its own dangers; bad taste, crowding, and pollution don't attract tourists; there are enough examples of such problems to make us very wary. High quality in tourist attractions is a rarity in Canada, so let us be rare.

Today, more than ever before, there is a movement toward becoming involved in nature. People want what Alberta has to offer, provided we avoid the trap of cheap, plastic, crowded messes that claim to be vacation spots. Access to all wilderness must be controlled, lest we destroy what we would preserve. Large resorts are unsuitable, and pull no tourists. Small resorts, with not more than 20 guests, banishment of all motor vehicles, located in or very near our existing rural settlements, makes much more sense than strip mines, fouling the waters and sending their profits out of Alberta.

Trophy hunting and meat hunting set firm cash values on big game animals. Such hunting is closely controlled in Alberta, as it should be. Some hunting is necessary, to keep game populations at optimum levels, or the herd will grow until it eats all the autumn browse by January- and the whole herd will starve before the new growth starts in March. It takes many years to rebuild a herd after this disaster has befallen it, and it is this that makes hunting a hard necessity. You will probably remember articles about Park Rangers slaughtering hundreds of animals in our National Parks when the herds got too big a few years ago.

Trophy hunting and trophy fishing bring in all the cash the tourist brings, plus a fat payment to the government of Alberta for the Non-Resident license; a chance for Indian and Metis peoples to earn good money and set up businesses as guides and outfitters; and no harm to anyone so long as stringent regulations are strictly enforced. Hunters are only rarely gun-happy boobs; and hunters who are not are more interested in eradicating such people from the ranks of licensed hunters than non-hunters are. After all, the good hunter is out in the same fields with the boob, and is worried about getting shot. The Alberta Fish and Game Association has pressed for years for more stringent controls, more severe penalties for violations of existing laws, and better conservation of our game and wilderness and fishing.

## THE CASH VALUE OF BIG GAME ANIMALS

There is a great deal of misinformation circulating about this subject. In an effort to clearly show the actual state of affairs, I will give facts covering one aspect of big game management. Data is from a thesis by W. Pattison, Agricultural Economics, University of Alberta (1970 thesis). All dollar values are in 1968 dollars. The only animal considered is the moose.

How much will a man spend to hunt a moose? The best answer available is how much a large group spent to kill moose compared to the number of moose that were actually killed. The following is data from 1968, Zone 1 (an area comprising most of the northern half of Alberta; see maps attached).

Hunters are divided into:

NARH - Non-Alberta-Resident Hunters, from out-of-province or the U.S.

NLRH - Non-Local-Resident Hunters, from the southern half of Alberta.

LRH - Local-Resident Hunters, from the northern half of Alberta.

TABLE I

	Number Of Hunters	Each Spent (Avg.)	Total Money Spent	Total Moose Killed	Value- One Moose
NARH	4,343	346.52	1,261,815	1,792	704.14
NLRH	9,525	160.51	1,528,537	2,093	730.31
LRH	11,947	115.20	1,376,294	4,508	305.30
Tot.	25,815		4,166,646	8,393	496.44

This gives a first approximation of the value of a moose. Now, how much did it cost Alberta to have the moose there? The only major cost is the cost of operating the Fish and Wildlife Division of the Department of Lands and Forests. The cost of F & W operations in Zone 1 was about \$350,000; the revenue from the sale of licenses to hunt and Wildlife Certificates was \$349,436. The net cost to the taxpayer was \$564.00, to look after the 65,000 moose that inhabit the northern half of the province.

Lest this low figure be looked at askance, please note that from the five year period before this paper, the cost to the taxpayer of operating the Fish and Wildlife Division was less than 6% of the Division's budget; the rest was paid by sale of certificates, permits, and licenses; and 83% of the total revenue came from hunters.

Now, as to the total benefits to Alberta: only \$231,121 of the \$4,166,646 spent (Table I) was spent outside the province. This is a pretty good boost for businessmen in the province.

Can we sustain a large-scale hunting operation? Well, a well-handled area containing 65,000 moose can replace 25% of the herd each year; it is possible to kill about 16,000 moose each year in Zone 1.

This, of course, requires some qualification. The herd must be in good condition; the kill must be distributed evenly about the area. Failure to kill results in overpopulation, a sick herd, and, if carried to extremes, death of the entire herd in the year when the herd expands to the point where it eats all the available food before the spring growth of new food starts.

Table I speaks of money spent. Where? For goods and services required by the hunters. The 4,343 Non-Resident Hunters (from out-of-province) spent nearly half a million dollars on guides, a valuable payment to our rural folk. Guiding became a major local industry between 1967 and 1968. Guides are required by law for Non-Resident Hunters. Gas, oil, lodging, food, etc. make up the rest, with the license fee to the Alberta Government making up a substantial portion of the cost (\$50 per non-resident; \$25 per resident; more for special licenses).

Now, to apply this to the Foothills area: It is obvious from the above that hunting, properly managed, is non-destructive of the game resource; that hunting brings money to the area; that it brings money to the province. This resource has been largely overlooked by planners; yet where else can we find an industry that brings in so much money, pays its own costs, and stimulates (even creates) local business?

Hunting is also non-destructive of the environment. It is capable of becoming a major financial factor in the Foothills, as some of the best hunting in the province is there, including hunting for species rarer and more valuable.

Alberta hunting is under-utilized in some areas; in the information quoted above, you will note that 16,000 moose should have been killed for best herd control, and only about 8,500 were. The kill was satisfactory for game management purposes in Areas 1,2,3,4, and 7. More animals should have been killed in the northern Areas.

Game animals must compete with cattle in the Foothills, where Crown land is leased for grazing. The elk herds are reduced by this, as less food is available, and more of them must be killed to keep the herds small. Yet the return to the province from an elk is probably better than the return from a cow.

Extractive industries remove game habitat to get at resources that go steadily down to extinction. Game animals renew themselves, and leave the wilderness as a tourist attraction. Very few tourists visit oilfields and coal mines.

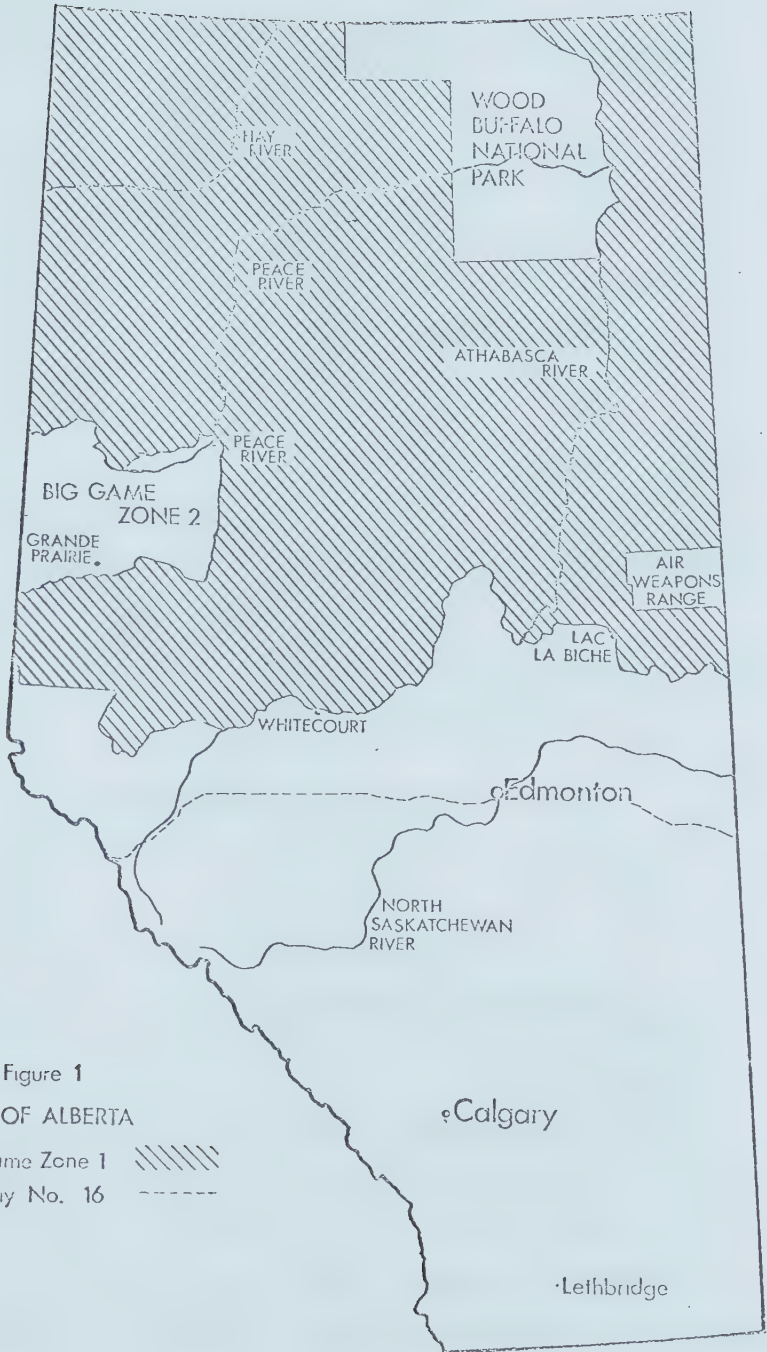
Africa makes good money from hunting, so why can't we? As available hunting areas shrink, so our hunting areas become more valuable to us. So, also, do they become more valuable to the non-Canadian hunter. We have the possibility of a major hunting industry. Will we use it?

Hunting, fishing, photography, controlled camping, high quality tourist facilities held to a size compatible with the environment. These will provide us with revenue without destroying our valuable wilderness, without destroying the way of life of the people who live in our wilderness. High quality means high revenue returns; destruction of wilderness for industrial extraction of oil and ore means destruction of the potential for non-destructive use.

Ecology is a delicate and complex science. We do not understand very much of what keeps a wilderness alive, and we make mistakes which cause devastation before we learn. We have destroyed enough of Alberta. Let us save this area from exploitation so that the next generation may see a healthy wilderness, filled with life, and not a forest of trees planted in carefully aligned rows.

Game animals and sport fish are valuable. We do not know how valuable, for we have never studied the matter. The paper I have used for this study is one of the very few ever to attempt to place a value on such things. In our ignorance, do we dare to cast away this resource for a mess of oil wells?





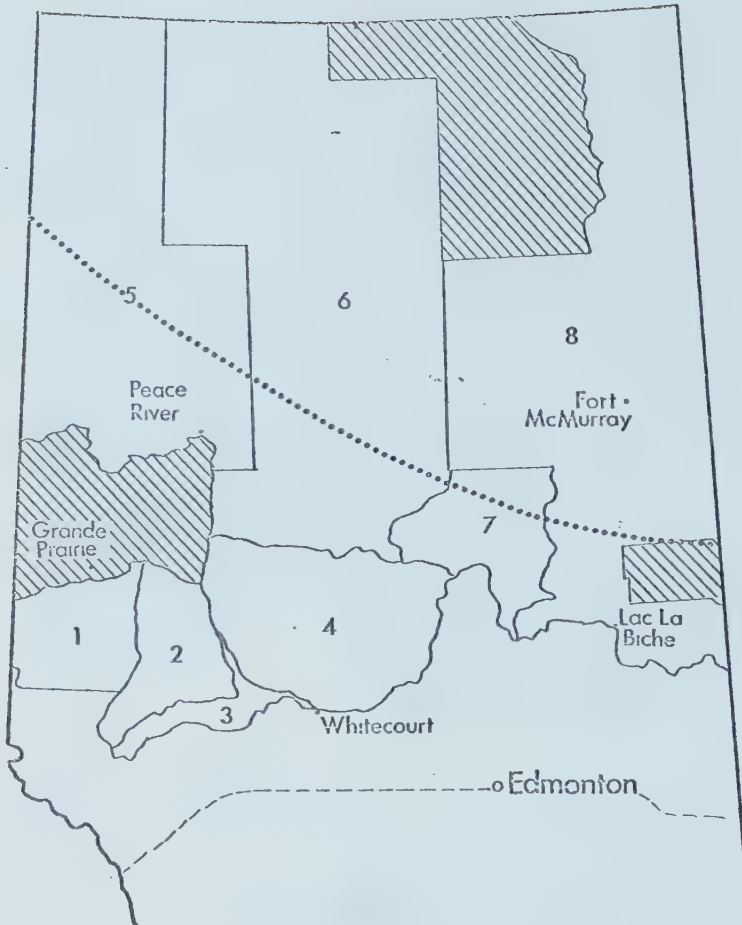


Figure 2

MAP OF NORTHERN ALBERTA  
SHOWING BIG GAME ZONE 1 BY AREAS

Highway No. 16 -----

Moose density demarcation .....

## LESSONS FROM THE SWAN HILLS .

In 1957, the discovery of oil in the Swan Hills led to rapid development of an area that was, at that time, an undisturbed, forested watershed. By 1967, this 300 square mile area contained 900 wellsites.

A wellsite is not very large; and three of them per square mile seemed at first glance innocuous. The hard lessons learned here should not be ignored when we consider what to do about another forested watershed- the Foothills.

The first lesson lies in the powerlessness of our Environmental control authorities. I quote from "EROSION CONTROL RESEARCH IN THE SWAN HILLS", by L.D. Goff (Forest Officer, Slave Lake Forest, Alberta Forest Service, Department of Lands and Forests):

"IV The Research Project

"A.Objectives of Research.

"...one main objective. This was to research practical methods that could be used by industry to rehabilitate the land.

"Because of the size of the area involved emphasis was placed on methods that would be:

"1. economically feasible.

"2. within physical means of accomplishment.

"3. based on a supply of equipment, material, and supplies that would be readily available.

"Any deviation from this would in all likelihood lead to development of methods that were not practical and would not be accepted by industry."

This report is dated March, 1971. At that time, apparently, it was possible for "industry" to get away with:

"accelerated erosion...resulted from poor engineering practices..."

"Failure to follow up (later landscaping) with a vegetative cover..."

"... 700 miles of high grade road. Most...right of ways cleared to... 100 ft."

"Roads have been improperly located... regardless of land contour."

"Not enough consideration...to water flow in the natural drainage systems."

"Culvert installations were too infrequent"

"Culverts and bridges...too small...improperly located."

"Few check dams to slow water flow in ditch bottoms."

"Excessive disturbances near streams and small watercourses."

"Little...soil stabilization by seeding grasses..."

"...drainages blocked, causing silt...build up and (killing vegetation)."

Having done all this, "industry" waits for public funds to find cures for the devastation, methods that must be cheap and easy or they "would not be accepted by industry."

What damage was done? Well, some townships were stripped of 12 to 18 percent of the area's vegetation. Down to the dirt. Test plots, made to simulate wellsites, each 160 feet square, were checked to see how much soil was being lost to erosion. In the period 1967 to 1971, plot #1 was losing soil at the rate of 4.3 tons per acre in 1967; 59.8 tons per acre in 1968; 65.4 tons per acre in 1969; 100.1 tons per acre in 1970; and 107.3 tons per acre in 1971. These figures are for summers only; winter precipitation had little effect. This was, admittedly, the worst plot; but even the best plot was losing 36.8 tons per acre in 1971. (From "Effects of Oilfield Development On Sedimentation In the Swan Hills, Alberta" by E.C. Wyldman and W.H. Poliquin, Dept of Lands and Forests.)

On a larger scale, the Swan River was checked to see how much soil it was carrying away from the whole damaged area. Between 1968 and 1971, the soil carried away each year was:

1968 -	109288 tons
1969 -	66365 tons
1970 -	160157 tons (possibly inaccurate)
1971 -	722292 tons

Oil spills and pollution have seriously damaged the sport fishing and other uses of the Swan River. (From "Effect of Oilfield...")

Industry has done this sort of damage, by being allowed access to the Swan Hills; industry is willing to do something about it, if the repairs are cheap and easy. We are apparently powerless in the face of industry, and our laws have no teeth. The two reports quoted are from 1971, not very long time ago.

The damage to wilderness is mentioned only by inference; the Department of Lands and Forests doesn't seem interested in the fact that their repairs are patchwork. Natural plants must be passed over; they won't grow, now that the topsoil is gone. Natural landscape gives way to contour plowing, terraces, dams, soil scarified by toothed bulldozers, straw and asphalt mulch, and plastic netting.

Whatever the Swan Hills mess is, it is certainly no longer Alberta wilderness. It is no use as farmland, but it must be farmed with tame plants (for many years) to even hold back the water and prevent further damage. As a tourist area, it is destroyed. It will be centuries before the scars are gone, even with the best of care; and industry is not very interested in repairs anyway. The profits are flowing; why should they care what has become of our land? The oil men live far away, and the oil field requires little thought today. No one is forcing them to look at the damage, no fines are being levied, no one cares.

Until the Swan Hills are repaired by the men who wrecked them, I shall be unalterably opposed to further grants of license to despoil our wilderness areas. Heedless destruction by punching seismic lines and access roads through the wilderness, then abandoning them, have cost us much. If we want more oil, surely the answer is to develop the Athabaska tar sands; this mighty source of oil will supply us for many years, while our oil wells hold instantly available reserves. The present policy of using the tar sands as reserves, relying on development of processing techniques in the dim future, is foolish. We need production there now, to stop destruction of the wilderness. The wilderness is the great asset of our future, for the people of other lands, who have destroyed their own wilderness will come to see ours.

The Effects of the Eastern Slopes Development  
for Tourism and Recreation.

On behalf of the Sherwood Park Fish & Game Association, this Committee would like to present the following brief regarding Tourism and Recreational facilities proposed for the Eastern Slopes of Alberta, and the effects it could have on our bountiful and beautiful natural resources if these facilities are not compatible with nature. We believe this quality environment is essential to our frontier intuition and necessary for our social well-being. Few realize how privileged we, the people, really are unless they have travelled in other provinces and countries.

We are aware that our present facilities for tourists and resident campers are far from adequate, and that more areas must be developed for the public to enjoy, but though we are a fish and game association we strongly believe in conservation and recreational education.

We realize that Tourism and all types of recreation have developed rapidly in this province -and it adds to the economics of this country considerably. Most of us are genuinely proud to "show-off" our beautiful province to our neighbors. We firmly believe it should be enjoyed by the residents of Alberta.

The Eastern Slopes of Alberta, between Waterton Lakes in the south and Grande Cache in the north, are beautiful virgin lands made millions of years ago. Few people have travelled through it - even on the forestry roads- and marvelled at the Ram, Sawtooth,



or Livingstone Falls; enjoyed the Kootenay Plains, Castle Mountain, Pigeon Mountain, Mount Cline or the many, many creeks, rivers and lakes throughout the area. Few Albertans have experienced the enjoyment on the ranches in the eastern slopes, or climbed a mountain to be awed by the splendid scenery. Yes, our eastern slopes do need to be developed, so that even the people of Alberta may enjoy this area, and we would imagine that many residents of that area, though there are few at present, would like to see it developed for their own convenience and for opportunities for their children. But the development must be done in a very well planned, well regulated way.

We, as members of the Fish & Game Association have great faith in our biologists and geologists. We respect their judgement and marvel, though often envy, their knowledge and "know-how" on why a fish won't bite our line, or the ways of fish and wildlife and everything regarding vegetation. We depend on them greatly to protect and improve our wilderness. Our Association members are the laymen in the church, ready and willing to help and suggest, and point out our concerns to the minister. Our biologists and geologists, by studying over the years, are well aware of just how long it took to develop the Eastern slopes and have great respect and concern for them.

Dr. John Honsaker is one - who works at the University of Alberta in the Meteorology Division of the Geography Department. He and his lovely wife, Leni, have been taking groups throughout Alberta this summer to study its' development. The rocks they find tell them



of the dramatic climate changes that have taken place over thousands of years. One layer showed peat moss meaning very warm, wet, climate dating back 2 million years ago. Mazama ash found indicated a volcano had erupted 6600 years ago covering the entire area.

Dr. and Mrs. Honsaker believe if more people explored and studied our geology, they would be able to think in "terms of thousands of years". Then they might realize how valuable our earth is and wouldn't destroy it.

We speak of the many changes in the last 5 years. The old timers tell of how things used to be 50 years ago in this country. There have been drastic changes in that short period of time. In the next 50 years we won't know this country, but we do not want it destroyed.

Very few years ago, one was able to enjoy the outdoors with a meager tent, bedroll, a few cooking utensils or an old tin can, and the clothes one had on his back. It was a luxury to have an ice box, gas lantern or gas stove. Today, tourists, and all those out for recreation, demand much more. Golfers, skiers, trail riders, snowmobiles and gun clubs, water lovers, all demand many more facilities and conveniences. These people have far more equipment, that takes more space and requires servicing.

Tourists - as an American said years ago on his first trip to Edmonton - "don't mind roughing it if the plumber has been there first". Today they demand much more than the plumber. Excellent motels, restaurants, highways and good service roads,

T.V. and radio reception, facilities for their pets, the daily newspaper, recreation of all types, a well equipped campground for their expensive trailers, campers and motor-homes, complete with washing facilities and playgrounds for their children. In fact, they would like to have them supervised. They expect good doctors, dentists, and hospitals near at hand, including ambulances, health spas and airstrips - both for their own private planes and commercial planes for a hasty get-a-way. They absolutely refuse to struggle through mud roads as we did ten years ago to enjoy the outdoors. They demand well equipped 24 hour service stations complete with mechanics.

To service this very complex operation of <sup>the</sup> tourism - huge transport trucks are required to bring in the many needs. Power and sewer lines are stretched across the country. Satalite stations must be built - who knows someday a tourist will be landing in his private space ship. Highways and service stations must be built. Food caterers are a necessity and salesmen will be swarming over this country, advertizing and supplying all the required items from the best onion soup to plastic dentures.

To build and maintain all these services will require many more employees - requiring many more homes, schools, hospitals, educational facilities - until the tourist becomes the small media of the whole complex.

A few years ago, the Eastern Slopes was a quiet peaceful wilderness. No one was very concerned about it. It lay somewhat

dormant - but it was very much alive in nature's way.

This spring and summer of 1973 there has been at least 138 commercial proposals for tourism and recreation in this area. There will be many more. These are not proposals on the small scale, but involve millions of dollars of construction.

The Sherwood Park Fish & Game Association sincerely hopes that the Environmental Committee Authority is, and will continue to study, all aspects of each and every proposal and its effect on the natural environment before permitting these proposals to proceed. Economically, they sound exciting and look very good on the credit side of the ledger, in bringing in millions of dollars for Alberta from tourist trade. There are many aspects to seriously think about besides the economical side of it.

1. Green Survival - as sponsored by the Nursery Trade Association and endorsed by the Sherwood Park Fish & Game Association, aims at improving the environment by protecting and improving it. Every aspect of the environment is touched by the gifts of nature.

Air, earth, water, sight and sound all depend, in one way or another, on the green growing trees and shrubs; grass and plants with which people spend their days.

And quoting Mr. Steve Lastiwka, President of the Nursery Trade Association, "As it has been from the beginning, Survival will be dressed in green."

But it won't be dressed in green, or inhabited by wildlife, unless strict regulations are set forth and enforced.

In Position Paper No. 13 - Provincial Parks Policy for Alberta

dated May 13, 1973 - seven major steps have been set out in the development of Alberta's natural beauty and all its aspects. Few realize how privileged we, the people, really are unless they have travelled in other provinces and countries. It does sound good on paper when the policy reads in part as follows:

- .. " 1. to develop according to ecological characteristics
2. there should be emphasis on outdoor recreation
3. we should preserve natural settings
4. we should protect the parks from mechanized use and certain intensive developments
5. there should be emphasis on family outings
6. we should encourage public involvement in the planning process
7. they will encourage outside Provincial Parks as an important potential for rural development and encourage recreation opportunities by private developers.

It sounds somewhat easy... but as in some other developments especially in our parklands... it sooner or later begins to deteriorate until it gets out of hand. None of us want this to happen in the Eastern Slopes. We have learned our bitter lessons. They should not happen again.

We therefore ask all members and departments of the Government of Alberta, and especially the Department of Lands and Forests, and all the public to be aware of:

(a) Disease in animals, flowers and vegetation. Many diseases are carried in on moving vehicles and people, and there should be strict control of pets. It was only a few years ago that mountain sheep became almost extinct in the Kootenays. At this moment, our Dept. of Fish & Wildlife believe our herd of 4500 mountain sheep to be healthy, but disease could exterminate them quickly. Alberta is one of the few spots in the world that has these beautiful animals. It wasn't

long ago in Banff that an American tourist stood in awe at a small herd in a salt slick and instructed all his friends to, "Hurry, take your snapshots - for you may never get the chance again". Having lived in Alberta for many years and used to seeing these animals in the mountain regions, we knew differently - but perhaps we do not realize how fortunate we are.

(b) There are, and can be, many more problems with the reproduction of wildlife and vegetation with the influx of tourists. There are certain times of the year when peace and quiet are necessary for the reproduction of wildlife and vegetation. Tourists with motor vehicles, can easily scare a mother bird off her nest or a mother from her calf... never to return again. Magnus Nyman, a 67 year old trapper who has lived alone in the wilderness for 40 years and watched wildlife in the woods all that time, believes that one car running one mile, does more harm than a trapper does in one year in the woods. With the opening of many new roads and trails and the movement of people there will be much intrusion on wildlife.

(c) Bees and pure air are required to reproduce flowers. Bees require fresh water to survive, and they need to be able to fly from the flower to their hive without anything to hinder them. All people, and especially children, are curious about an ant hill, but what right have tourists to dig in it. With the opening of this area and the encouragement of more tourists and outdoor living... there will be thousands of cans of insect repellent sold - polluting the air for wildlife and destroying the habitat of the insect world

required to reproduce vegetation that is required for survival.

(d) All wildlife marks its' boundaries, and these markings must not be destroyed or disrespected in any way. Tourists and moving vehicles, polluted air and streams could do just that.

(e) Natural sounds, air, water, earth and odors are required for wildlife and vegetation to survive. It is their natural way of life. If these are destroyed, or even covered to a small degree, by the continuous excitement of children, the smell of chemicals, food odors and humans - it won't be many years until the cycle of nature has perished. Nature knows no other way to survive.... they can not learn another method. Without nature... man will perish.

(f) There are at least 317 species of birds in Alberta. They like to be around people. Few song birds are found in wilderness areas, but they must be able to hear the sound of their kin and of enemies. Noisy trucks, hollywood mufflers, motorcycles, power plants, cats and dogs, snowmobiles will only chase them away until they finally become extinct.

(g) Streams of Alberta have some of the purest water from the mountains. Tourists have proven over and over again just how quickly they can contaminate a stream or river. The Red Deer, Oldman, Pembina, Clearwater, Ram, Bighorn, Highwood, Castle and their many tributaries are all in the Eastern Slopes and could be delightful spots to fish, canoe, photograph and enjoy, but there must be strict

control of debris being thrown in to these streams and rivers - as well as sewer from the proposed motels and hotels.

(h) Wild flowers grow abundantly in Alberta if they are left alone. There are certain spots in Central Alberta that produce wild flowers that are not to be found in any other part of the world. The residents of these areas are proud of them, but they wouldn't think of divulging the information to the public for fear of them being destroyed. These are the wonders of nature that will be found all through the Eastern slopes, and will be thrown wide open to the public and to progress with the opening of this area. There are many parts of nature there now that only the residents know about. Many more wonders will be discovered, and certainly not by the people who spend the majority of their time in government buildings in our cities, but will come to light with the increase of tourism and recreational requirements. We ask the Environment Conservation Authority to be ever on the watch for the protection of these wonders.

(i) The public in general believe that because they live in an area, and especially if they pay taxes, that they have the right to pick wild flowers, molest wildlife or cut down trees for commercial use. Many years ago a pilot, who landed in the rugged peaks of the North West Territories, went for a walk while waiting rescue. He was amazed to come upon a field of beautiful wild flowers of all types. Is this not proof that they had been created for wildlife alone to enjoy? For no human had any intention of ever being up there. In fact, more than likely they had inhabited the area long before humans had ever been in the whole territory. What right then have we to



destroy them...by picking them or digging them up with bulldozers?

(j) There are at least 14 hostels proposed from the 138 applications for increased tourist trade. Young people are travelling far more extensively, so that there are more campers or hikers inhabiting the hostels. Our churches, schools and communities are conducting more camps and training more people in the winter to go camping. If they expect to make shelters from spruce bows, have campfires and a clean campground, they should be expected to take the responsibility of planting trees each year, and disposing of garbage. A percentage should be paid to the Dept. of Lands & Forest for the privilege of occupying this land that is bounding with wildlife and vegetation. If these organizations don't intend to plant the trees, or clean up the garbage, then they should pay the highways department and Lands & Forest for doing these chores. They should strictly understand that they are not to molest animals and birds.

(k) There has always been an influx of University and High school students converge on our tourist facilities during the summer months for summer employment. Today with young people being far more independent there are far more travelling, and they are of a younger age. They seem to enjoy noise and speed, and encourage each other to participate in excessive activities. They are travelling from the Atlantic to the Pacific. They spend considerable time in the outdoors and could be spreaders of disease, forest fires, destructors of vegetation and polluters. We do not believe that young people from

other areas have any higher qualifications than our own Alberta young people. We therefore support stricter entrance qualifications as to health and recommendations. Many peaceful evenings at our local lakes have been destroyed by young people tearing around in hot-rod cars, yelling and playing loud guitars, to the extent that nature lovers have had to return home. In many cases campers do not feel safe. It used to be that one could pitch a tent, leave it unoccupied all day, have a peaceful supper meal and campfire, and retire early to the sleeping bag. Those days seem to have gone. There is no need for it. We urge the Government to not only think of the financial gain in the opening of new tourist areas and recreational facilities, but to understand that it is obvious that the people of this province need much greater outlets to enjoy our natural wealth.

POLICY:

The procedure of preparing provisional master plans, releasing them for public comment, and reconsidering them after these public hearings, is a commendable one. However, like every other government venture since the beginning of time, policies have been set down, but not enforced, until there becomes a humble-jumble of nothing, and people are very unhappy.

The National Parks Act and National Parks Policy both sounded good, but often are not enforced. The development of the Eastern slopes is for tourist trade, whether it be local or from other provinces and countries. Everyone is hoping to have capital gain from the development, but the Eastern slopes has beautiful scenery and wildlife,

Sparkling waters, clean air and dust free vegetation. If developing destroys it, neither the present or future visitor or resident will ever enjoy it all again. As our geologists and biologists have explained to us many times over - it takes many millions of years to grow such a country, but it seems to take only a very few to destroy it.

We have three good examples of that:

Lake Louise is a very good example. It was a beautiful spot. From 1920 to approximately 1955, when the tourist trade was only for the elite, Lake Louise was peaceful and serene. When you sat in the hotel and looked over the clear, calm waters to the snow tipped mountains beyond, you were in another world. You forgot all the cares of the day. You forgot about material things. Today, a crude fence has been constructed. There is conjection in parking, people are pushing and crowding through stores and restaurants that put people through for meals like an assembly line. People are yelling back and forth to each other... the peace and serenity has been destroyed. One wonders why they came to Lake Louise - obviously not to enjoy the beauty. It has been turned into a commercial factory..

Banff is still another example. It too used to be a relaxing resort town which some of us visited every week-end - where people could get away from the push, push of our busy cities. Where you could go horseback riding or golfing without belonging to a club. There was clean, cool waters of the Bow running through the town... there were few cars on the streets, people drove for miles after a busy day in the office to stroll along the streets of Banff and look up in awe at the mountains -

often spotting wildlife in the summer, or a different formation of snow in the winter. What is there today? Nothing but a rush of people.... who nearly knock you down as they bound out of a store or restaurant.. people running across the street, always in a hurry, to get out on the highway to speed to the next place on the map... and yelling, "We're leaving early in the morning, so hurry and get some grub", or "Gertie, did you buy that postcard to send to Aunt Matilda?" and then they dive down to the post office. This is what cities are for, not our parkland. The peace and quiet of Banff has now been destroyed. No one is particularly interested in the Bow river, the flowers around the Administration building or all the art and culture of the Banff School of Fine Arts. Why did they come then? Why has all the respect for our outdoors, and for those that enjoy it to the fullest, gone? Many Albertans refuse to enter the park gates again. It too has been taken over by commercialism. This was not its' purpose.

Miette Hot Springs and Jasper Park are on the way to the same burial. We almost wish Highway 16 had remained a dirt trail. Mountain Sheep are pushed down the steep banks by moving vehicles crowding in to Miette. Or they are chased among the cars or tents that cover the small areas of grazing land these creatures so rightly deserve. This has been their land until lately.. why are they now not the rightful owners?

Every summer the crystal clear streams and waterfalls in the Raven Fish Hatchery are contaminated with pop and beer bottles, potatoe chip bags and candy wrappers. It is a privilege to be allowed in to this

beauty spot, but visitors of all types continuously try to destroy it. This park was opened many years ago by our heritage. Today, trees and fauna have been destroyed, litter is everywhere after a picnic, and a high fence had to be constructed as industry was too close and employees thought it was a good place to "cut loose" on a hot evening.

We urge you then, to keep tourist facilities away from the beauty spots of nature. Leave the towns along the Eastern slopes for capital gain. Soften commercialism with a few small parks within, but leave the Eastern slopes nature dominated with spaces for people to enjoy... not droves of noisy people that end up with few nature spots.

#### LAND USE:

We believe that areas should be seriously studied as to the location of motels, hostels, ski lodges, golf courses or gunclubs. We believe these would be of economical benefit to the towns along this route, though at present there are few, and induce employment for many that are forced on to the unemployment list.

We believe that strict regulations should be set up as to gunclubs, snowmobiles, souped-up motor vehicles and motorcycles that seem to have been accepted by the public - though we don't believe they have any place in the peace and quiet of nature. These regulations should be enforced at all times. Nothing is more distressing and destroying to wildlife, and the peaceful enjoyment of the outdoors, than these noisy occupations. They destroy the landscape, winter habitat of underground dwellers by packing dirt and snow or literally destroying the dwellers homes. Every city park has a sign at the entrance, "No motorcycles allowed in this park"... yet they are there..

no matter when you visit the parks. Non-enforcement of regulations cannot continue in this manner any longer. We are not dead-pans or old foggies and we do believe in progress... but if the public believes that we do not care about our wonderful wealth of nature they will begin to feel the same way. Be leaders - not followers. The public is like a child. It will try to get away with everything, but underneath they want discipline. They know then that you care. Show them that you care about our fish and wildlife, our flowers and vegetation by enforcing regulations to protect this wealth.

Golf courses, airstrips, residential community and recreation resorts - especially those with year-round facilities should be controlled and allocated to certain areas near present towns.

Such major proposals as the 500 acre site adjacent to the south Toreens river and Wapiti Road should be discussed and supervised by our biologists. This is an extremely dense and rugged area, and well inhabited by grizzlies, black bear and moose. At the present time only the surveyors, a few pack horse outfits, trappers, and the very hardy fisherman or hunter has ventured in... but the southern tip does lie close to the Willmore Wilderness and Jasper Parks, where other big game animals easily to extinct, could be readily available.

The Kootenay Plains contain magnificent country accessible to the day hiker with good probability of viewing elk, bighorn, sheep, deer, bear, small rodents and various alpine wildflowers. It should not be destroyed by powerlines, highways and tourist facilities. Nor can we disregard our concern for the wild horses in this area. With the high price of meat and the demand for fresh horsemeat in Europe,

these animals, native to this country, must be protected.

With the popular upswing of skiing, serious consideration should be given to the areas of these facilities and the number constructed should be curtailed. Commercialism of every aspect of this sport is taking over our stores, magazines, radio programs, hotels and motels, transportation, and there seems to be no lack of capital to support this sport. Skiing consists of building roads, power lines, cable transportation and scarred slopes. If abandoned or over-run will only lead to considerable damage and unsightly terrain in our present natural beauty.

We highly commend such proposals as the Bow Wildlife Park and Elbow-Sheep Recreational Wilderness that is proposed for the Eastern Slopes.

#### RECOMMENDATIONS;

1. We believe the Provincial Government should have full responsibility for management of the Eastern Slopes, through the Department of Lands & Forests and the Department of the Environment joint scrutiny.

2. We believe that strict regulations are required in the operation of all tourist and recreational facilities, and that these regulations be enforced continuously - not from time to time.

3. We believe that the operators and owners of these facilities should be responsible for enforcing regulations around their premises, and that is should not be entirely done by Provincial Government employees. If the owners can not enforce them on their own, then they should pay a fee to have the Dept of Lands & Forests, Dept. of Highways, or law abiders support.

4. We strongly believe that the operators and owners of these privately owned premises should encourage the visitors to enjoy the abundant beauty of nature in Alberta, but also encourage the visitor to protect, conserve and not destroy it.

5. We urge every operator to be interested and learn about the location he has chosen, so that he may pass on his knowledge



to his employees and then to his visitors.

6. We would urge the Dept. of Lands & Forest to establish an adequate buffer between commercialism and natural beauty spots and wildlife at all times.

7. Adequate sewage disposal facilities must be a first priority in the development of the Eastern Slopes.

8. Adequate garbage treatment must be a first priority in its development - whether it be along the highways or in the tourist and recreational areas. A prime example of neglect is the constant over-flowing of garbage receptacles on Highway 16 west.

9. If enjoyment of nature for the people of Alberta and our senior citizens is the ultimate goal of our government - then a lower speed limit must be maintained through our beauty spots or recreational facilities. Perhaps transportation should be provided by the government for our senior citizens to these areas.

10. Conservation must be kept at all times in "prime time" to forever remind our government of the damage done by snowmobiles and ski cables to our vegetation; the influence of freeway highways on big game; or the need to more safely mix grizzlies and people. The bear, wolf and coyote always seem to be in the wrong. If only they could tell their side of the story!

11. We would like to see the Department of Lands & Forest establish centers along the Eastern Slopes, complete with displays of the geology, biology and zoology of each area, such as that at Diefenbaker Lake in Saskatchewan - giving information to the tourist, school groups, and visitors. When it is pointed out to these people just how long it has taken to establish these natural wonders, we would hope they would enjoy and protect them instead of destroying them. Perhaps these centers could be staffed by present residents, who are familiar and concerned about their immediate areas.

12. Although the Alberta Fish & Game Association and its many branches have never been one to discuss, or recommend, the subject of food, we urge strict regulations be set up in the handling of food ...whether at tourist facilities or recreational outlets. Our 20,000 members and their families have been exposed to very poor and unhealthy establishments where food is concerned at these outdoor establishments. We urge the Government to set up and enforce strict rules in this department.. not only in the buying, preparing, serving, and keeping of this necessity, but in disposing of the waste brought on by cooking and handling. Food garbage attracts flies and all disease carrying insects. These can be transferred to our vegetation and wildlife. Garbage attracts wildlife - our deer, bears, chipmunks and birds. Eating to them is surviving. As far as they are concerned it is their main reason for living, and they do not believe they are

doing anything wrong by treading on the doorstep where they find food. Why should they be disposed of - because they try to survive? It would be appreciated if they are not encouraged in this occupation. Garbage must be strictly covered... so that wildlife will learn quickly that it cannot be obtained. Wildlife is quicker at knowing when they are not wanted than people.

In closing this brief, we of the Sherwood Park Fish & Game Association wish to thank the Environment Conservation Authority in the Government of Alberta for giving us this opportunity to submit our believes and hopes for the future of our Eastern Slopes.

We appreciate and endorse the recommendations suggested by the many other groups interested in the protection and conservation of the natural beauty of Alberta.

We support any educational facilities or teachings of nature, in the hopes that the public will appreciate our concern in its survival and the survival of man - now and in the future.

And last, but certainly not least, we support all those working in the Department of Lands & Forest, Fish & Wildlife, Culture, Youth & Recreation, Agriculture, Highways, Industry and Commerce, Environment, and the many branches working along with them to better the enjoyment of our outdoors and yet protect it.

We would sincerely thank the Environment Conservation Authority for supporting our concern in regards to developing the Eastern Slopes, in a way that is compatible with nature - before issuing permits to any of the proposals for this area.

\*\*\*\*\*

-- Committee for this Brief

Lois Brown

Guy Landry

Dave Tomlinson

Dated... May, 1973.

## A C K N O W L E D G E M E N T S

Many thanks go forth to the following who so diligently supplied us with information for this brief, and for having the faith that we could accomplish this feat.

1. John Ashton, M. L. A. - Edmonton-Ottewell
2. Dr. H. W. Thiessen - Director - Interdepartmental Planning Division of the Department of the Environment
3. Elmer Kure - Director of Environment Relations for the Alberta Fish & Game Association
4. Archie L. Hogg - High River, Alberta
5. R. T. Flanagan - Superintendent of Jasper National Park
6. Magnus Nyman - a 67 year old trapper who has lived alone in the wilderness for 40 years
7. The Federation of Ontario Naturalists
8. Dr. & Mrs. John Honsaker - Meteorology Division of the Geography Department at the University of Alberta
9. Nursery Trade Association
10. The Department of Fish & Wildlife and Hunter Training Division
11. Saskatchewan Industry Department and the "Outdoors" magazine
12. Sun Press Ltd of Edmonton, and the C.B.C. for their interviews of late on the outdoors
13. To the Executive and members of the Sherwood Park Fish & Game Association for having confidence in this committee to complete this brief
14. And many thanks to my two member committee - Guy Landry of Sherwood Park and Dave Tomlinson of Edmonton.

\*\*\*\*\*

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

I was particularly interested in your statistics concerning the dollar value of animals, but the figure you gave us was for moose alone. Approximately how many elk, deer and other ungulates were hunted over this same period?

MISS BROWN:

This survey was done only on the moose. I would imagine the Department of Lands and Forests could give you that information.

MR. KINISKY:

Are you suggesting that when we talk about the extractive industries they should be able at least to show that kind of return to the province and that kind of multiplier factor, as far as dollars earned are concerned, before they have the right to go ahead with extractive work?

MISS BROWN:

The development of coal and other resources is doing damage to our environment in many ways. Wildlife isn't doing any damage. It is renewable and it more or less looks after itself.

MR. KINISKY:

Does your club have a position on the use in the eastern slopes of motorcycles, skidoos and all-terrain vehicles?

MISS BROWN:

They are not very popular with us and there has been a lot of controversy over the use of snowmobiles for hunting wild game. New laws have been set up in the last year.

MR. KINISKY:

What is the problem in connection with skidoos and hunting?

MISS BROWN:

There have been reports of them chasing and running over coyotes, as well as making a tremendous amount of noise. Now the regulation is that skidoos cannot be used before 12 noon.

Presented By Western Canada Snowmobile Federation

W. C. Shields

The sport of snowmobiling in recent years has come in for a lot of unfounded and unfair criticism from some segments of our society. These criticisms have mainly come from uninformed laymen and "amateur" conservationists. The following is a short brief taken from the reports of various professional experts dealing with most of the so called "problem areas".

1. Paul Doherty, Game Biologist, Dept. of Fish and Game, New Hampshire  
... "I have seen almost no cases where snowmobiles have invaded deer yards to the point that harm was done to the animals. As a matter of fact, snowmachine tracks in deer yarding areas have show that the deer use these trails to reach food." He concludes. "Now the snowmobile is being blamed for many things... it is time for the game wardens to speak up and tell the truth".
2. Morlan Nelson, graduate in soils sciences and engineering, and is presently Snow Survey Supervisor for the Columbia River Basin.  
(a) "Snow surveyors throughout the west have been travelling through game herds in various types of noisy snow machines for more than 30 years. Fish and Game Department Conservation Officers have been using such machines to count game for almost the same length of time. The game is not disturbed or excited by the noise alone. Snow Surveyors have been amazed at the fact that game would move up the mountain only 100 to 300 yards before curiosity overcame their fear and they stopped to look and observe this strange creature.

(b) On Pressures

The destructive potential of any machine can be estimated in two ways. First is the pressure put on the soil or snow in pounds per square inch. This is the basic to all computations when the machine is in moving equilibrium, neither accelerating or stopping. In table 1 the pounds of pressure per square inch exerted on the soil or snow have been estimated for various vehicles. We know from experience this generally follows our known principles of compaction or destruction of the earth's surface. A horse or man will make a trail if the same path is followed repeatedly, but generally walking around in an area is not overly destructive unless there are too many of either. Of all types of transportation, including walking, the snow machine is essentially the least destructive of all.

(c) On Snow

The condition of snow is constantly changing, from the moment it falls to earth 'til the day it finally melts to run water into the soil or down the mountain. Changes in temperature, humidity, wind, increasing pressure from more snow falling on top, addition of water through rain on the snow-pack, and many other things work constantly to change the crystalline form of the snow flake and subsequently, the nature of the snowpack.

Most of the time the layer of snow at the surface of the pack is relatively dense. This may be caused by a number of factors including sun-melt, rain, humidity, wind action, or freezing air temperatures.

A snow machine travelling over the surface of such snowpack will have no effect whatsoever on the snow beneath the surface, let alone on the soil.

Even if some pressure is transmitted, it will be very slight.

During the powder snow condition, if it occurs early in the season, a machine could compact the snow to the soil. This is a relatively rare condition similar to the thousands of square miles that are compacted by skiers in recreation areas. The effect of compaction to the soil has yet to be determined as far as mice or other animals living through or in the snow are concerned. I know of one place where it did not have a significant effect. After completing a snow measurement, including density, I skied down a regular trail and cut a mouse in half during a turn. The density of the snow was 38 percent as I had measured it, but the mouse was going through it and was cut in half by my skis. The mouse was about an inch or more below the surface and had a run going down into the snow.

There are other possibilities in "powder snow". A snowmobile will usually sink about a foot to 18 inches. The area compacted in the track melts more slowly in the spring, helping to create a more useful, controllable runoff.

One snowmobile track, or a dozen, might not cause much difference but a systematic contouring of a critical watershed with snow machines offers the potential of actually "farming" the snowpack for valuable water supplies.

3. Dr. Gale Gleason P.H.D., is head of the natural sciences' division at Lake Superior College, Sault Ste Marie.



Dr. Gleason states that he is familiar with the use of power-sleds in Ontario, has studied ecological reports from scientists in Quebec, Minnesota and Wisconsin, and is able to draw conclusions from these reports and from his own studies.

(a) Soil Undamaged

First he deals with the effect of snowmobiles on soils and vegetation. The sandy soils and sandy loams in the non-agricultural regions north of the 45th parallel, are frozen to a depth of two to five inches before snow falls.

When this is the case, soil texture is not damaged. The residual accumulations of plant materials get compressed by snowmobiles. The vegetation undergoes compaction which increases the rate of decomposition during winter. This provides a more ready source of nutrients for the annuals which predominate in the snowbelt region.

(b) Grass Grows Sooner

As a result of compaction caused by snowmobiles, the same annuals mostly grasses, emerge earlier in spring and provide the first spring food for the rough grouse, white-tailed deer, and many of the smaller rodents.

On clay soils and clay loams, the plant materials respond well to compaction, they form a soil-stabilizing force and provide a much needed supply of food for many animals.

Dr. Gleason makes it clear that his conclusions on snowmobiles and soil compression are drawn from observations made on snowmobile trails. The benefits to plant-life do not occur from the random movements of power-sleds which do not cause snow compaction.

Secondly, he deals with the relationship between snowmobiles and water resources. A Lake Superior College project has clearly proved that the compaction of snow over ice by snowmobiles results in more light getting through the ice. This increase in light could help fight what is known as 'winter kill' so common to the many small lakes in Ontario and snowbelt states.

The project discovered that compaction down to eight centimeters let through sufficient light on induce photosynthesis during daylight hours. In other words, the lake's plant life got enough light to continue living.

(c) Scientific Evidence Favourable

The third conclusion drawn by Dr. Gleason relates to snowmobile compaction and its effects on the white-tailed deer, moose, coyote and wolf. Several biologists have concluded that the snowmobile benefits the predator-prey relationship between these animals.

A heavy snowfall in February and March last year confined deer to their yards in the Sault Ste Marie area, and in some parts of Ontario the moose were forced to congregate too closely together. In this situation deer and moose are continually harrassed by coyotes and 'wild dogs'. But where the snowmobile had entered these areas, the moose and particularly the deer, were able to escape to new yards.

Dr. Gleason concludes his findings by saying that scientific evidence to date does not justify banning the snowmobile from wild-life and natural areas. Indeed there is evidence that the activities of the snowmobile should be encouraged.

TABLE 1 ( referred to on first page )

"Average pounds of pressure per square inch exerted on earth's surface":

OBJECT	LBS. OF PRESSURE
Automobile	30
Motorecycle	12
Horse	8
Man	5
All-Terrain Vehicles	1.5
Snow Machine	.5

( All vehicle weights considered include 210 lbs. estimated weight of one person and gear )

## QUESTIONING BY THE AUTHORITY

MR. DOWLING:

Would you comment on the use of a trail designed specifically for snowmobile recreation, also on the possible use of a confined area rather than a trail for snowmobiles. How would your federation react to such a proposal?

MR. SHIELDS:

First of all, let me talk about a trail system. Our Trans-Canada Highway is basically a trail. It's for automobiles. Snowmobile trails are a little different. In some places they might be only four feet wide, in others two miles wide and three miles long. This is what we refer to as scramble areas, open areas where you can crisscross and so forth around the fields.

An ideal snowmobile area which could handle up to 300 machines, providing the trails were groomed, would have a circuitous route of approximately 50 miles. There would be an inner network of short trails ranging from one-half mile to one mile for the person out with his family or sharing a machine with other people who doesn't want to get too far away from home base. It would include a parking area for the trailers and tow vehicles and would have interconnecting trails and scramble areas.

MR. DOWLING:

But you wouldn't have any objection to having a specific area for snowmobiling where you would not be interfered with?

MR. SHIELDS:

I'll answer that in the context of your second point where you suggested a confined area. Yes, we would most definitely have an objection to a confined area. If we were confined to an area people in the surrounding area would be a heck of a lot madder than they are now about the noise level produced. We would cause damage under those circumstances because compaction would reach the point of ice. It would be extremely severe.

I think the solution is dispersion over as wide an area as possible, but again bearing in mind that it has to be done in such a way that our rights and the rights of others are respected.

MR. DOWLING:

How far does the average snowmobiler want to travel for a day of recreation? Let's say it's a family travelling. Would they go 10 miles or 50 miles or how far?

MR. SHIELDS:

They would probably travel between 25 and 40 miles on the average. The more ardent snowmobiler would go from between 50 and 100 miles in a day. I've done 300 miles myself in one day.

MR. DOWLING:

We've also had suggestions that the use of snowmobiles should be restricted at certain times during the winter season. The thesis has been put forth that if there is ecological damage it occurs early in

the season when the snow cover is very light or at the end of the season when the snowmelt is quite advanced and there is very little snow left. What reaction would your federation have towards limiting the season?

MR. SHIELDS:

I think this would have to depend on the bounce-back potential of soil cover in those areas. You would have to look at every area independently. I would agree, for example, that you wouldn't want snowmobiles running on alpine meadows before there are 24 inches of snow cover. However, this hasn't been a problem in the past because to get to those meadows on a snowmobile you have to go up and down the foothills when the snow level is at a constant elevation. By this time, generally speaking, there are probably four feet of snow on the meadows.

MR. DOWLING:

Snowmobiles and trail bikes are being refined to the extent that their noise levels are being greatly reduced. Do you know if we have a decibel reading on the noise they produce?

MR. SHIELDS:

Yes we do. It's under federal regulations. The decibel rating on last year's new models was 82 dBA, which is equivalent to the sound level inside your automobile when you accelerate to 50 miles per hour on the highway. The problem with the noise is that it's a different sound.

DR. TROST:

Does the Western Canada Snowmobile Federation consist of membership from the provincial associations?

MR. SHIELDS:

Yes. We represent the users in the four western provinces. It's a loosely-knit organization for the exchange of information and ideas. Also, we have safety programs and we assist one another.

DR. TROST:

Are educational or driver training programs carried out by the provincial associations?

MR. SHIELDS:

That's correct. We exchange ideas on what we are doing and try to pick the best out of each other's programs.

DR. TROST:

You said you have some information that might be of interest to us.

MR. SHIELDS:

If you feel the interest is there, we can certainly supply this information. Unfortunately, most of these reports have come out of the United States. Canadian ecologists have done very, very little to date on the study of the snowmobile and its effect on the environment. We hope they will get involved.

DR. TROST:

We would be very interested if you have anything bearing directly on the eastern slopes because the conditions there are going to be rather different than in most other areas.

MR. SHIELDS:

Yes, from the experiences of professional people in alpine regions of British Columbia. I can make one comment here which might help you. With a hand-picked crew Mr. Robert Ahrens, the parks director in British Columbia, personally checked over the Silver Star area out of Vernon in British Columbia. He went over it with a fine-toothed comb. This is one of the most heavily used areas in the province, yet he concluded that there was absolutely no environmental damage.

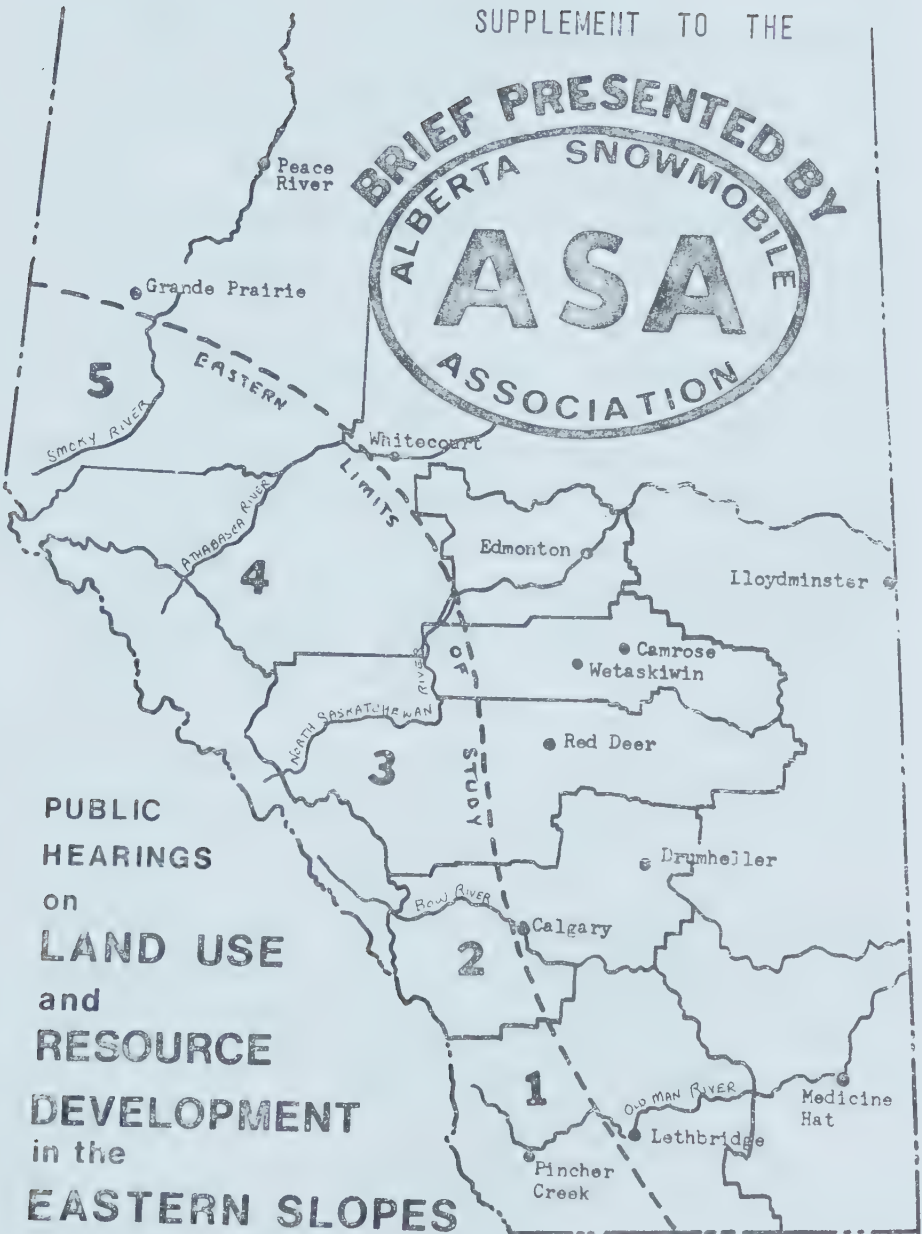
DR. TROST:

Are you located in Edmonton?

MR. SHIELDS:

No, south of Edmonton.

SUPPLEMENT TO THE



**PUBLIC  
HEARINGS  
on  
LAND USE  
and  
RESOURCE  
DEVELOPMENT  
in the  
EASTERN SLOPES**

Presented By: D. Blakeman



## PURPOSE OF THIS BRIEF

The purpose of this brief is to supplement the comprehensive brief presented by the Alberta Snowmobile Association to the Hearings when they were held in Calgary.

It is our concern to bring to the attention of the Environment Conservation Authority the importance of the eastern slopes of the Rockies to the recreational snowmobiler.

It is important that it be realized that the type of terrain most suitable and most enjoyable for snowmobiling is the hilly wooded terrain common to the Alberta Foothills.

The recreation of snowmobiling involves some 200,000 residents of our province, there being an estimated 60,000 snowmobiles in Alberta at present. Thus a sizable portion of the population is involved and stands to be affected by any legislation or policy which may be instituted.

## SNOWMOBILING - A WINTER RECREATION FOR A NORTHERN COMMUNITY

Before the advent and availability of the small snowmobile, many people had not discovered satisfactory outdoor winter activities. Now a whole new group of people have found a way to live with our winter - - and enjoy it!

But, by its very nature, snowmobiling requires space. Space to move and manoeuvre. Space to test and improve one's riding skills. Space to allow for safety. Where can snowmobile enthusiasts go with their machines to enjoy a winter's day?

We submit that the eastern slopes of the Rockies are an obvious area for this activity - ideal as to proximity, terrain, snowfall, low density utilization and natural beauty.

Snowmobilers are outdoorsmen, sportsmen, and conservationists. The fact that they endure the rigors of winter to enjoy outdoor recreation speaks for their love of the outdoors and semi-wilderness conditions.

Snowmobiling is enjoyed at a time of year when activity on the land is at a minimum yet the natural beauty of the land is at its peak. During the period when snowmobiles are used the terrain is protected by a mantle of heavy snow. No group leaves the area less altered or with less damage to the ecology.

Not everyone is able or inclined to hike, back-pack, climb or ski in the mountains, yet everyone should have access to them. We feel therefore, that it is imperative that these areas be open to motorized vehicles.

## THE RECREATIONAL SNOWMOBILER

The "average" snowmobile family, according to statistics, consists of a father, age 38, with two children, who takes his family with him when snowmobiling. He uses his snowmobile an average of 42 days each winter, spending about four hours on the trail each of those days.

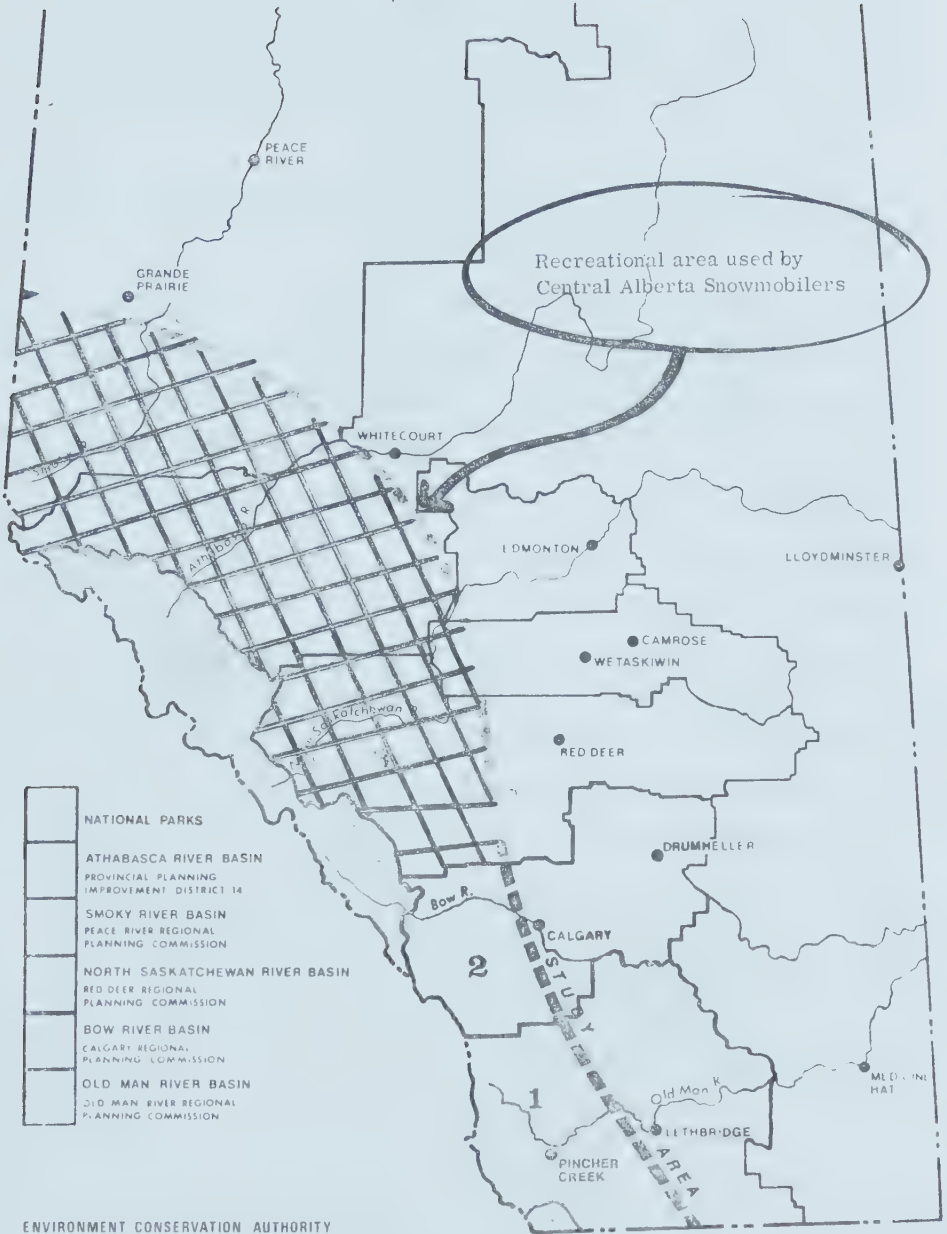
A recent quote from a Calgary Columnist says "I know families who say that snowmobiling has done more for them than praying together ever did."

Members of our association would echo this sentiment, as snowmobiling is truly a family sport. Our time around the campfire roasting wieners and enjoying a sing song are as important as the time actually spent on the snowmobile.

As with boating, the snowmobile is sometimes the focus of the activity and sometimes just a means of getting from here to there. In this country there aren't many options if one would travel the back ways in winter.

Many of our members are avid hikers, boaters, fishermen and hunters.

They use the same areas during the summer for these activities that they use during the winter for snowmobiling and therefore are keenly interested in maintaining these lands in a clean and natural state.



Use of the eastern slopes of the Rockies for recreational snowmobiling is important to two distinct groups of Central Alberta residents:

- 1) those who live in towns located within or adjacent to the eastern slopes, and
- 2) those who live in larger centres such as Edmonton, Wetaskiwin, Ponoka, Lacombe, Red Deer and Athabasca.

The first — mentioned group — residents of smaller centres near the mountains and their foothills — express concern regarding restriction of access to Crown lands surrounding their towns. In this category are residents of Sundre, Markerville, Rocky Mountain House, Rimbey, Bluffton, Calmar, Drayton Valley, Edson, Hinton, Jasper, Swan Hills, Fort Assiniboine.

Specific examples of the need for access to Crown lands have been expressed by clubs from these towns.

Camrose: " Parks facilities should be enjoyed by as many recreational groups as possible. During winter months very little use is made of park facilities other than by snowmobiles.

Rocky Mountain House: " Be it resolved that large areas of Crown land be allocated for snowmobiling."

The urban snowmobiler makes numerous trips into the eastern slopes of the Rockies both early and late in the winter season when snow is scarce on the plains. He seeks space, suitable terrain and the natural beauty of the mountainous and forested areas.

To the local towns they are tourists, patronizing motels, hotels, restaurants, and gasoline stations. This off-season business is avidly promoted by Chambers of Commerce.

It is felt, however, that some roadside campgrounds should be kept open to accommodate the increasing number of winterized self-contained recreation vehicles.

The potential for winter recreation on Crown lands of the eastern slopes during the winter season cannot be denied. Snowmobiling must be recognized as a viable form of winter recreation and accommodated accordingly.

## OUR POSITION

1. The Alberta Snowmobile Association speaks for Alberta's 200,000 snowmobilers.
2. The Eastern Slopes are prime multi-recreational lands.
3. Existing crownlands for multi-recreational use must be maintained and additional facilities provided.
4. Small-user groups must not gain control of large tracts of land close to large population centres.
5. The economic impact of snowmobiling on the provincial economy should be considered in setting aside recreational areas. (It is a multi-million dollar industry)
6. Manufacturers have made great improvements in the snowmobiles to make them more acceptable both to the user and non user.
7. The snowmobiler is a keen outdoor sportsman.
8. No significant proof has been brought forward that snowmobiles damage the environment and, on the contrary, many experts are now recognizing the snowmobile's value.
9. Snowmobile clubs are providing the leadership and training to make this a safe sport.
10. The Alberta Snowmobile Association is anxious to work together with government and other interested parties in developing new areas and improving existing facilities.



THE ALBERTA SNOWMOBILE ASSOCIATION was formed three years ago to represent clubs and individuals throughout the province at the provincial level.

The Alberta Snowmobile Association is made up of registered and unregistered clubs, various snowmobile racing associations, the snowmobile industry, and individual members from areas where there is no registered club.

It was our belief that a provincial organization was required to co-ordinate the efforts of clubs and individuals in matters of province-wide concern.

The Alberta Snowmobile Association is working with the government in formulating snowmobile policy, preparing legislation and laying out trail systems. The association conducts instructor and driver training courses throughout the province. A very important segment of the training course is environmental responsibility.

President of the Alberta Snowmobile Association is:

Arnold G. Swaren, Calgary

Vice-president:

Denis J. Blakeman, Edmonton

## QUESTIONING BY THE AUTHORITY

DR. TROST:

Have you been surprised at the number of recreational groups that have expressed reactions against snowmobiling?

MR. BLAKEMAN:

I have been surprised that in all of the seven government briefs put forward not one statement said snowmobiling was a recreation. There is some opposition, but there is nothing that says we exist. We are 200,000 strong and maybe we have been the silent majority. We don't jump up and down and scream until we're hurt. I think we believe now that people are trying to hurt us, that people are trying to say they want this piece of land and don't want snowmobilers.

DR. TROST:

Do you know why they don't want you?

MR. BLAKEMAN:

I really don't. The reasons they put forward, ecological damage for instance, have never been proven. They're all hearsay every time we run them down. We do come up with some darn fine statistics through proper surveys to prove this isn't really the case.

I think noise has been a factor, but recreational snowmobilers put pressure on the companies as long as three or four years ago. We were conducting the surveys and we were putting pressure on the companies urging them to get this noise level down. I'm quite amazed by some of the young people who are wilderness advocates and who talk about the noise. I'm in a high school, and when I look at these young people of 21 and 22 I think it was only two or three years ago when they were in a gymnasium listening to a 130 decibel band. They are the same people who say that snowmobiles at 80 decibels are a problem.

DR. TROST:

Would you describe what the Alberta Snowmobile Association is doing in respect of driver training for young drivers?

MR. BLAKEMAN:

In the previous brief there was quite an extensive explanation of what the association is forwarding to the clubs. With regard to driver training and safety, two or three years ago the Alberta government, urged by the snowmobilers, set up a safety program which involved driver training. Snowmobilers went to these courses and many of the people in the Alberta Snowmobile Association naturally went back to their own clubs and other clubs to bring this forward. I think this is one approach.

My personal approach was to take my little boy at eight years of age to an area and put him on a machine that was set so it couldn't run any more than about four miles an hour. I kept him there and he went around me again and again. Then I taught him to go around my hat and in a figure eight. I spent hours and hours and hours and hours just teaching him how to ride. Then I taught him how to fall off. Finally I slowly set the throttle up on his machine, and it's a small machine. That's the kind of thing I advocate.

There are many people who can't teach their own children and the club must teach them. But what we are saying is, isn't this an individual responsibility? I think it is to the same extent that it is your responsibility to teach your son or daughter how to drive a car.

DR. TROST:

Is there a part of the driver training program in which instruction could be given on the impact of the snowmobile on someone who isn't on the snowmobile?

MR. BLAKEMAN:

The sociological aspect? This comes home to my children every day of the year at school. They enjoy their sport and I don't think they try to cram it down anyone's throat. But there has been a concerted attack upon them, I think, and upon all young people who ride snowmobiles. Time after time they come home and say, "I don't really mind if Joe or Peter or Sam ski. That's their business. So why do they have to pick on me as a snowmobiler. Why do they hate me?" It's very difficult to explain to your children why they hate you. You could give lots of false reasons, jealousy for example.

But I think the sociological impact on our children is already there. Maybe this is what other minority groups and groups who refuse to fight back have always been subjected to. But our people really understand that other people are concerned. I don't really believe those other people have all their facts straight. I wish they could get a few more facts straight and understand our position as people. We're not machines, we're people.

DR. TROST:

Have you engaged in any talks with other recreational users of the slopes?

MR. BLAKEMAN:

No, we haven't talked to any of these people. As I say, to this point I don't believe we were really aware of the magnitude of the attack upon us and our machines. I'm amazed, shocked and dismayed that people have made so many claims that we do things to them, and in particular I speak of the gentleman from the Wilderness Association. We've been here. We've existed. We had a convention here not too long ago which was reported in the paper. What approach has he made to us? Has he asked us to come in and give our point of view? I'm really curious about why they haven't approached us. Should we be doing this in the future? Yes, I think we need a dialogue very, very badly.

DR. TROST:

It would be interesting to see what would happen if you actually sat down with these people and tried to work out something mutually satisfactory.

MR. BLAKEMAN:

We're interested.

Brief submitted by: Mrs. Bertha Fakeley  
Edmonton, Alberta

MRS. FAKELEY:

My husband and I have five children ranging in age from 10 to 16 years. We have spent many enjoyable hours as a family group, sometimes joined by one or more families from the Edmonton Snowmobile Club, in adventures across country by snowmobile. We look forward to winter weekends out of town as much as the summer ones. To us the crisp air, sparkling snow and background of hills and mountains means much. Winter holidays are a big part of our family life, due to summer work. Our tours take us from the Rocky Mountain House area to Canmore, through Sundre, west to Hinton and the Jasper Park gates and also to areas south of these places. Each winter for the past four years we have made repeated weekend trips to The Overlander Lodge, taking in indescribable trips and good times snowmobiling. These will be long remembered and we hope to be able to continue taking these in the future. This is why we are asking that major developers not be allowed to buy up large quantities of land, thereby making recreation impossible for us and our children in generations to come.

You may ask, why not snowmobile around Edmonton? We do, but much of the surrounding area is privately-owned, which restricts us from using it. We have land, known to all members of the Edmonton Snowmobile Club as home base. However, we do enjoy getting out for a weekend and exploring other land which belongs to all Albertans.

Where do we stay when we are in small towns? Our evenings are spent in hotels or motels and days are spent in the wide open spaces. We would appreciate seeing a few winter-maintained camp shelters where families with their own accommodations could camp out and others could leave their machines. This would help the parking areas in smaller towns. We feel the towns, motels, lodges, et cetera do appreciate our business, as snowmobilers spend quite a lot of money for oil, gas, sleeping and other requirements.

I feel nothing could be more educational for children than for their parents to take them out and teach them how to handle their machines as well as to respect the land on which they are snowmobiling and their fellow sportsmen regardless of the type of winter sport they may choose. Do we object to gas and oil companies taking this land for their required use? We say, take only what is really necessary to carry on a business but do not restrict us from using it, as we are not restricting you.

Do we ruin trees in the forest? To this I reply, no we don't. When in mountain areas we follow either cut lines or summer trails which are worn free of all trees. The odd shrub or tree may be run over accidentally, but generally speaking there is no harm done. After all, these machines do cost a fair price and no one would begin to use one for a bulldozer. Therefore we ask that you who can help us control and maintain our eastern slopes. We should not allow developments, whether large or small, to gobble up our land so we are no longer able to use it.

One may ask, who will be harmed if a small area in a mountain valley is sold? To this I answer, many. A few small developments soon cover one large area and use up this land of ours.

In closing I relate back to an old saying. Close the gate before the horse gets out and not after. Our plea is, help save the eastern slopes which rightfully belong to us as citizens of this vast land.

## QUESTIONING BY THE AUTHORITY

MR. DOWLING:

You have five children. How many snowmobiles do you have in your family?

MRS. FAKELEY:

We have five.

MR. DOWLING:

Do you have twins?

MRS. FAKELEY:

No, we don't. There are times when all of our children can't go. One daughter who is in the band seldom gets to go with us. Also we have a young son who is only ten. If we are on private land he can operate his own machine, otherwise one of us must ride with him. When we go to Jasper we normally take six machines.

MR. DOWLING:

How do you transport these?

MRS. FAKELEY:

We transport them behind our car. We have a large trailer built to accommodate five machines.

MR. DOWLING:

A single car can pull the five machines?

MRS. FAKELEY:

Yes.

MR. DOWLING:

What do you do with them in the summertime?

MRS. FAKELEY:

We store them under cover in the yard.

Presented By: G.A. Faulder

14332 - 92 Ave.  
Edmonton, Alberta.  
T 5 R 5 E 3  
July 5, 1973

Environment Conservation Authority  
Province of Alberta  
Edmonton

Gentlemen;

Re: Brief for Eastern Rockies Watershed Utilization

I respectfully submit this brief which I hope will assist the Government of this province in planning the utilization of the Eastern Rockies Watershed area for the short term and the long term enjoyment of residents of adjoining areas.

I make this presentation on behalf of myself. I am 44 years of age, the father of six children, employed as a Professional Engineer.

My particular interest, aside from desiring the most beneficial use of the area for all, is the recreation of snowmobiling.

I submit that in planning the use of the thousands of acres available for recreation, consideration be given to snowmobiling. As one who particularly enjoys mountain snowmobiling I would be pleased to see areas set aside for this activity. I believe that the existing terrain features are suitable for snowmobiling and that with minor new development and change, some first class snowmobiling area could be made available.

The primary work effort required to make snowmobiling an effective recreation is to consider it in the planning stages. The key to providing good snowmobiling is to properly utilize existing facilities. Snowmobilers have never advocated the modification of terrain for their use.

I see the requirement for adequate spacing of snowmobiling areas to avoid over use, and possible damage to terrain. Perhaps, some roads normally closed during the winter, could be plowed out to gain access to snowmobiling areas.

Overnight accomodation facilities would be required, probably at existing centres along the fringe of the watershed.

I know that snowmobilers would be genuinely interested in assisting in the planning, operation, and supervision of designated snowmobile areas. It is in the interest of all snowmobilers to see our 'Provinces' natural resources used efficiently.

Yours truly,

*George A Faulder*  
George A Faulder



## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

You talk about gaining access in the wintertime by roads that are not normally kept open. There have been suggestions that campgrounds should be kept open or at least semi-operational during the wintertime. How many of these campgrounds do you think would be beneficial not only to snowmobile users but to anybody who likes winter camping?

MR. FAULDER:

I think the Edmonton area could probably make use of six sites.

MR. KINISKY:

How about the campsites that exist along the forestry trunk road?

MR. FAULDER:

I don't really know. Some of them, perhaps the ones that are reasonably close to built-up areas, might be useful as staging areas. The ones close to Hinton and Rocky Mountain House might be useful.

MR. DOWLING:

You have six children. I hope this question is not too personal, but how many snowmobiles do you have?

MR. FAULDER:

I have two.

ENVIRONMENTAL CONSERVATION AUTHORITY HEARINGS ON THE  
EASTERN SLOPES OF THE ROCKY MOUNTAINS

Edmonton, July 4,5,6, 1973

Brief submitted by Dave White and family

Address: 8514 104th Street, Edmonton, Alberta

I am grateful for the opportunity to speak at these hearings being held in Edmonton. My family and I have followed your previous hearings throughout the province with great interest and at this time wish to express some of our opinions regarding the future of the eastern slopes of the Rocky Mountains.

Our philosophy and recommendations to the authority are as follows:

- 1) There ought to be no development on the eastern slopes which will prevent the ordinary person in Alberta and Canada from enjoying the beauty, solitude, privateness and recreation which this outstanding landscape and natural resource offers us.

This recommendation provides us with a guideline for an approach to the eastern slopes--that of natural parks and not massive, complex and expensive developments which will cater to a select few and possibly irrevocably mar the landscape, as has happened in past.

My family and I are believers in the concept of provincial parks. We have camped in many of the parks throughout the province for the past 10 years--a period of time which has seen a steadily increasing use of provincial parks.

We have however, received our greatest satisfaction from campsites, not provincial parks necessarily and from natural provincial parks such as the Sir Winston Churchill Provincial Park at Lac La Biche. This park, located on an island, has been developed as a natural park with far less campsites than other provincial parks of a similar or even smaller size.

It is the opinion of our family that natural provincial parks are the type of development that ought to be encouraged on the eastern slopes. Our family is biased against huge, complex and costly developments, that while providing pleasure and recreation for a few, would be beyond the reach of the majority of citizens. The point is that to enjoy outdoor recreation, families are faced with rising costs--costs few will be able to meet if they are staying in an hotel or motel constructed at a so-called recreational complex in the wilderness of the eastern slopes.

Our family can travel to many provincial parks and potential parks on the eastern slopes at a cost of approximately \$25 per weekend--including the cost of gasoline, food and camping fees. This would be impossible to do at many, if not all of the recreational developments proposed to the authority during these hearings. And at the same time we are camped in a park that is compatible with the surrounding natural landscape and not living out of a room in another concrete jungle out of character with the eastern slopes.

Additionally we are opposed to any type of industrial development being allowed in areas such as the eastern slopes and this includes oil or gas holdings and coal mining, particularly strip mining.

Representatives of industrial interests have made their presence felt at these hearings and obviously will continue to do so. They have portrayed an attitude of being sincere toward

protecting the environment. These interests have maintained there can be multiple use of the land through the use of careful planning. My suggestion to this authority is that these same interests have not shown sincere behavior as corporate citizens in protecting the environment in the past and therefore give us no reason to, at this point in time, expect anything better in the future.

The second recommendation which our family proposes to the authority deals with the participation of Albertans in these hearings and decisions which could ultimately be made as a result of the hearings.

The provincial government, in other areas, has shown a genuine interest and desire to promote participation by citizens in decision which affect their lives. It has been called open government and I would suppose these hearings can be classified as part of open government. I would suggest however, that it is open government in a most constricting manner. The desire and interest to promote participation from the public, not just large vested interests with the financial backing to participate, must be encouraged by the authority and the provincial minister of the department of the environment. To do otherwise will do no more than allow such hearings to become a sham. The recommendation of our family is this:

2)

a) Citizens of Alberta must have the right through a mechanism provided by the authority to state their concerns, problems; propose solutions and ideas and offer opinions on subjects which the authority brings before the public.

2)

b) The authority must provide a mechanism whereby Albertans can bring to the authority concerns, problems and topics which Albertans feel the authority ought to investigate or examine. The authority must not limit itself to a discussion or examination of topics suggested only by the provincial government or the authority itself.

c) Citizens of Alberta must have the right to further comment on, debate and be involved in decisions which may be taken as a result of the authority's recommendations coming from these hearings. This means decision must not be taken by orders-in-council for that is not, in my opinion, government by the people. But rather the decisions must be taken in the legislature after comment, debate and involvement from the public.

Throughout these hearings we have heard comments from members of the authority about the lack of participation from Albertans. Why is it that so few Albertans participate in hearings that could be so critical to the future of this province? And why it is that the briefs, or at least the majority of briefs this authority has received and will receive, have come from sources which were expected to speak to the authority?

Certainly it is a question of vested interests, but that is not all. I do not believe the authority has actively sought to have Albertans participate. Yes, I have heard the few radio commercials and articles in newspapers throughout the province. But what else has the authority done to promote participation from individuals or groups?

Today there are techniques which can be and are used to encourage citizens to participate in identifying problems, seeking solutions and participating in decisions which affect their lives. In the face of bigness of government and industries, people feel hopeless, powerless and frustrated in attempting to cope. How do such people make their voices heard to an authority such as this?

For one thing, I don't feel that many people even are aware the hearings are being held in Edmonton today and secondly, and perhaps most important, they may not even know how to go about presenting a brief to the authority, let alone being able to cope with compilation of information to put into a brief form. They are not organized,

It is questions such as these to which I recommend the authority give more than token attention in future. The authority must provide assistance to groups and individuals who want to voice their opinions and that is a time consuming process which must begin long in advance of any public hearings.

I do not present these opinions here today out of anger, but with a feeling of hope for the future, not only for our family but for all Albertans and am willing to elaborate on the points raised if so requested.

Dave White  
July 4, 1973

## [CHAIRMAN'S STATEMENT]

DR. TROST:

I am reluctant to make comments in response to criticisms of the Authority. But in this particular case, since I know Mr. White has made his comments with our benefit in mind and since his specific recommendations are ones we feel are desirable, I think I should say something to clarify the questions he has raised.

For the last 18 months we have worked very hard to encourage wide public participation in this particular hearing. We think we, with the staff, made an extraordinary physical and mental effort to bring about as much involvement of individuals, groups, associations and citizens of the province as possible, both in this hearing and in all the ones before this time.

We feel that there has been very good participation from citizens, individuals, groups and so on. I am getting a little tired of people telling us they have read in the paper that members of the Authority feel there hasn't been good public participation. The fact is, members of the Authority feel there has been top-notch public participation. We have had hundreds of submissions; many, many more submissions from individuals and groups than we ever dreamed we would have. Thousands of people have attended these hearings and discussed with each other and with us what should be done with this problem of resource use and land use on the eastern slopes. We've been astonished and immensely pleased by the amount of time, thought and effort individual citizens have put into their submissions.

We have been tremendously pleased with the success of the information centres we established throughout the province and with the immense effort that the members of the Authority and the hundreds of people who worked with us put into the gathering of information that went into these information centres.

The public libraries, the universities, the community colleges and the planning commissions have cooperated with us most wholeheartedly.

It has been, from our point of view, a tremendous experience in public participation. Individuals and groups have worked tirelessly and have participated in every possible and conceivable way.

In response to your suggestion that we should try to organize and set up machinery that actually gets to individuals, groups and associations, we have set up, worked with and had great success with public advisory committees on which groups and individuals have membership. Our public advisory committee has a membership of something like 100 province-wide organizations. There is a constant working relationship between these large organizations that often involve considerably more individuals than there are people in the province. This is because a person is sometimes a member of more than one organization. So I think there are very few individuals in the province who are not members of some functioning organization that, in turn, has representation on our public advisory committee on the environment.

This group is broken down into subgroups or study groups, bound together by a coordinating committee. Each year it stages conferences dealing with environmental problems in the province. These are open meetings and everyone is welcome to offer advice on a steady and regular basis. The Authority then passes this advice on to the



cabinet. We think this system of public advisory committees - there are four altogether, one large one and several others set up on specific subjects - has been working tremendously well. Individual members, who are ordinary citizens like all of us here, have put in great amounts of time, talent and intelligence and we are very pleased with what they have done.

I'm sure you'll be interested to know that next year we will have a province-wide conference on environmental education. We think this will be a great contribution to the general development of man's attitude towards the environment. We have a great series of programs developed out of the public body that are worked on by tens, twenties and hundreds of people from across the province. We're tremendously pleased and overwhelmed by the amount of public participation in our programs.

I must say that it is not possible for us to be sure that everyone in the province knows when we are going to have a hearing. On the radio this morning the announcement of this hearing, for some reason or another, placed it at Grande Cache. It's a little difficult to overcome some of these things. However, I want to lay to rest the statement that has been made so often to me and to us during these hearings, that the members of the Authority have, in any way, expressed disappointment with the level of public participation. We have been tremendously impressed and very pleased with it indeed.

A BRIEF CONCERNING LAND USE AND RESOURCE DEVELOPMENT OF THE  
EASTERN SLOPES OF THE ROCKY MOUNTAINS

Presented by: Joy Johnston

Reading newspaper reports of these hearings it seems that there are three areas of contention regarding land use and resource development on the eastern slopes of the Rocky Mountains. They are tourism, industry and conservation. I have no special knowledge in any of these fields but speak as an Albertan who has observed the scene, drawn my own conclusions and wish to have some say in determining the destiny of this area of our province.

My conclusions are as follows:

TOURISM

We have extolled the glories of Alberta as an outdoor paradise, which it is. Our publicity has been most effective, leading to heavy use of our recreation areas. Today there is a continual demand for more outdoor recreation areas and that the facilities be upgraded. Looking at the parks and reading promotional literature regarding recreational equipment one wonders whether we or our visitors are interested in the outdoors at all. An ad for a recreational vehicle for example lauds the following features -

Air-conditioning - is this really necessary in the pine-scented air of the forestry trunk road?

Stereo sound system - how about the stereo sounds of all outdoors, birds, squirrels, rain drops on leaves and most beautiful of all - the silence you can hear?

Then the ad lists an item that's a mystery to me - a systems monitor!

Perhaps these rigs are geared for space as well as earth travel. Believe me when I heard the putt-putt of an R.V.'s generator in the twilight of a mountain campground last year I wished it was in outer space!

However I do believe that most people who leave the city at weekends and vacation time are seeking peace and do want to enjoy the countryside. Unfortunately we've all been sold a bill of goods on how "Bigger is Better" and if we just have all those goodies Madison Avenue urges on us then we'll be in heaven. When will we see that the "Keep up with the Jones" materialistic philosophy is one of the most corrosive of city pressures. By being taken by the admen once again and buying every latest recreational gadget we are importing the city's problems to our recreational areas.

There was a time when campgrounds were pretty egalitarian places. Umbrella tents of varying vintages sheltered a wide variety of individuals and one got to know the other guy's point of view on a hike or around a cookstove as together you fanned a recalcitrant fire. This sort of atmosphere still pervades the Forest Service campgrounds. However other campgrounds many with many facilities resemble suburbia, and noticing the vandalism and general 'don't care' attitudes of the users I question whether any recreation is occurring. Rather it would seem that the users have been frustrated at finding more of the same when they'd hoped for something to renew their spirit.

Taking this theory that the overspill of city values into our recreational areas is detrimental to the recreation of our peoples' spiritual bank account, the government of Alberta should keep tourist facilities in large areas of the Eastern Slopes at minimal instead of maximal levels. For example:

Campgrounds should be maintained as the Forest Service does at present, cabin camps if established should provide sound structures, basic housekeeping facilities and possibly some central food services, there should be resource people who could interpret the surroundings on request. The government should run these facilities, it being quite possible that students from the University, NAIT and SAIT or Vocational Institutes could be seconded to these areas to plan, construct and maintain these facilities as part of their educational experience.

Furthermore by keeping these developments at a basic level it is possible to employ local people, whereas highly sophisticated facilities usually have to be built and maintained by journeymen from outside the area.

This sort of tourist facility would not expose guests to undue hardship, rather it would give them a chance to find their own resources. Then having had a glimpse of their potential they might well be less swayed by the blandishments of the admen. Possibly we could begin to reverse the trend to oversophistication which is most detrimental to the natural beauty of our foothills recreation areas.

For those who want city amenities on their vacations I would suggest that Alberta's great outdoors is not really their cup of tea and that they would be more content if they satisfied their tastes in our cities where I am sure the Chambers of Commerce would be glad to urge the building of the necessary amenities.

#### INDUSTRY

In a province which depends a great deal on agriculture there is a justifiable demand that the economic base be expanded. There are many resources on or in the Eastern Slopes and naturally industry would like to use them. To our sorrow we have seen the effects of industry elsewhere - the eroded lands of Appalachia and the graveyards of weathered tree stumps in the Pacific Northwest. I am not fully convinced that industry has turned over a new leaf, it is hard to produce a product, a profit and protect the environment, especially when the latter cuts into the first two. We the general public must convince industry that we do want a preserved environment, even if this means not purchasing many of the proliferating products that do not substantially affect the quality of our lives except in the view of the glossy advertising.

The Government of Alberta has a great responsibility to see that any industrial development on the Eastern Slopes is essential and not just another plant to make another something to add to our already overburdened

life-styles. If industrial use is necessary the true cost, including land rehabilitation must be known at the outset. Project planning must be governed by environmental factors. After the fact band-aid repairs to ruined countryside are no longer acceptable.

It stands to reason that as the Eastern Slopes have other attributes besides those wanted by industry, it may well be that their non-industrial use will be more beneficial to our people, and other areas in the province should be considered for industrial development.

### CONSERVATION

Last but not least of my conclusions. The East Slopes provide water for much of Alberta and parts of Saskatchewan. They are also the home of many varieties of wildlife.

Obviously we must protect the watershed, water being our most basic need. However we must proceed with great caution in laying plans for water management. We have only to look at the Athabasca Delta to realize that we are not always alert to the dangers we expose our lands to when we change water flows. Furthermore despite years of activity by the United States Corps of Engineers the Mississippi still runs on the rampage. Obviously man is not the omnipotent creature he once believed himself to be. Perhaps we should join forces with nature instead of trying to subdue the most powerful force we know.

We should make every effort to allow wildlife to follow its natural cycles. We have seen that our well-intentioned eradication of a problem has led to others often more complicated.

The idea that great areas of wilderness be accessible only on foot has great merit and in general I am in sympathy with the concept. However like many others I have to live with a two week vacation. Possibly consideration could be given to arranging limited access by public transit means to drop off and pick up points to assist people with limited time to experience deep wilderness areas.

Hopefully at some time an Outward Bound School will be established in the wilderness areas set aside.

In conclusion I would ask the government to make haste slowly on their decisions. If a countryman visits the city he may shake his head at the goings on and after a day or two returns home leaving the city scene unaffected. When large numbers of city folk arrive in the country they shake the countryside, not their heads, and things are never quite the same again.

Change is not always for the best. We should learn to let some things be.

Brief submitted by: Mr. Garry O. Petersen  
Alberta Youth Hostels Council  
Edmonton, Alberta

MR. PETERSEN:

I'd like to say a few words on the submission made by the Alberta Youth Hostels Council. My particular interest in youth hostels at this time is in regard to Scout groups I have been associated with for the last few years. I feel that the responsibility of this government toward youth organizations of this type and the encouragement of their use of areas such as the eastern slopes are reflected directly in this youth hostel proposal. Developments of this type, youth hostels that provide low-cost facilities for youth groups, Scouts, church groups and other groups who wish to get into the mountains and out of the city, are a responsibility we have to our young people.

A large number of groups in the city are not taking advantage of our wilderness areas because of expenses involved in camping and this sort of thing. Campgrounds require a great deal of organization and output in equipment, whereas youth hostels provide a very simple and cheap method for people like myself who want to take a group of boys out into nature. I won't dwell on other aspects, all of them good I think, of youth hostels, but on this particular aspect I offer my opinion.



## OPEN DISCUSSION PERIOD

MR. KYLLO:

Leo Kyllö, Western Conservation Foundation.

I have an article from tonight's Journal. I'd like to read one paragraph from it.

The Ontario government's select committee studying motorized snow vehicles and all-terrain vehicles was told Wednesday that noise can adversely affect one's sex life.

In all fairness I must mention that this was in reference to urban areas. However, I do have a comment for the members of the snowmobile clubs we heard from today. I think there is a bit of a misconception. The Western Conservation Foundation, supported by the Alberta Wilderness Association, does not wish to restrict snowmobiles from using the eastern slopes area. It is much the other way. We do promote snowmobile and all-terrain vehicle use in certain areas. Extensive areas should be developed for these very critical and very enjoyable recreational uses. We do not feel, however, that they should have the use of all areas. Certain areas should be set aside for other uses which are restricted by the use of snowmobiles and other motorized recreation. I would suggest that the impact of a person cross-country skiing or hiking on a snowmobile or trail bike is very limited. But the impact of a snowmobile or trail bike on a skier or hiker is much more severe.

The area that has been proposed as a wildland recreation area is somewhat less than 20 per cent of the forest reserve. This isn't the eastern slopes area; it is the forest reserve area. We feel that in the 80 per cent that remains extensive areas can be set aside for all-terrain vehicles, snowmobiles, trail bikes and such. By all means, we support your position in many ways.

We have had discussions with several snowmobile clubs and other recreational vehicle clubs, mostly in the southern part of the province as that is where I and several other members of the AWA live. Most of these discussions were very fruitful. I don't think any problem will prevent us from coming to some decision. But I think the decision should be left to the government with possible representations from the various groups involved.

I'd like to make a brief comment on coal mining as well. Today Mr. Coates from Luscar suggested that coal is a major energy resource. I would suggest that if it is such a major resource, why are we in such a hurry to give it away? The people of Alberta should not lose valuable recreational, watershed, wildlife or energy resources to the benefit of eastern or foreign markets. It seems to me, having followed these hearings ever since they began in Coleman, that there are many companies with many locations and they are just waiting for a market to put them into production. In fact, they seem to be competing for markets. If this competition is resulting in an individual development situation with less viability or a reduced return to the people of Alberta, I think we should be in a position to place some restrictions on it.

I would suggest that there might be reason to consider such an agency as a coal marketing board which would arrange the possible markets and the sale price of reserves and then locate a company under some priority system that would be in a position to market the resource. In this manner, the public expense of railroads, roads and

support services such as towns and schools could be built into the price of the resource much more than it has been to date. This is a suggestion that might have some merit and I place it before the committee for consideration.

MR. SWANSON:

Bob Swanson.

This is addressed to the man from Luscar. Would Luscar be willing to help develop access to alternative areas in the event of a conflict between recreation and coal? The coal lease could conflict with a recreation area and I wonder if they would be willing to help develop access to another place as part of the cost of developing this coal.

I have another question for Luscar and also for Mr. Becker of the Canadian Petroleum Association. Do either of these industrial agencies have an environmental manager on their staff with veto power over the development of a particular property?

With regard to the motorcycle trail riders group, would Mr. Phil Gordon consider setting aside competition areas as viable and useful centres for activity within the eastern slopes. There are, of course, areas where we could set up trails that would be quite a challenge to motorcyclists and perhaps even skidoo operators. They could perhaps give plaques to people if they make the top of the darn thing. Would this be considered a viable recreation activity on the eastern slopes?

Mr. Lambert of Tract Equipment felt that we need a bit more information, and I wonder if Tract Equipment would be willing to financially support research programs to determine the impact of snowmobiling on the eastern slopes. There is no data for this. This is a company that operates for profit in this area. Is he willing to put up some money to find out what it is doing?

This question is for Mr. Shields and for the five or six snowmobile presentations. I'm willing to concede that snowmobiles per se are not particularly damaging. I use them myself in my work. But are you aware of any opinions or factual studies regarding the interference of noisy machines with the solitude sought by most winter wilderness users. I grant you your right to use the area, but this takes away my right to experience silent solitude.

MR. BECKER:

Howard Becker, Canadian Petroleum Association.

You asked whether petroleum companies have in their employ someone who looks after the environmental aspects of their operations and can veto an operation if it is adversely affecting the environment. I can speak in general of the industry and, of course, my own company's case.

In my own company, Hudson's Bay Oil and Gas Company, we have a department called the Environmental Conservation Department of which I am the manager. I report to the same executive vice-president as the exploration manager, the production manager and the pipeline manager. I don't have a veto over what they do and they don't have a veto over what I do. In a company such as ours, the only ones who really have a veto over anything are the president and the executive vice-president. However, since I report to the same boss as the developing people, I am able to put before him any problems we have and if they are serious

and are causing real damage he will take the appropriate action. So companies do look after the environment.

Sometimes I say to people that if they as individuals would spend the proportion of time, money and effort that industrial companies spend looking after the environment, we'd have a much cleaner and better environment in our cities and countryside.

MR. LAMBERT:

B. Lambert.

We would be more than pleased to cooperate through an Alberta association of all distributors who, out of their own profits, could donate a certain amount of money per machine towards ecological impact research. Our manufacturers do not allow us to adjust our prices to accommodate this, so it comes right off the top of our profits. Anybody familiar with economics knows this is an extra thing that most businesses don't really have to contend with.

We have a lot of information available to us from governmental agencies, universities and other sources. It gives the actual pros and cons and doesn't cover up anything. This is available to us through the ISIA which has offices in Washington and Montreal and is regionalizing in order to work with situations like this. I know, as a director of the distributor's association, that we as a group of responsible businessmen would certainly do everything required to work something like this out. It takes millions of dollars to finance these reports and most of this money has already been spent in other areas. We could take their benefits and their knowledge and work on it from there. It would be hardly worth while to hire hundreds of thousands of dollars worth of personnel and equipment to go over a lot of the facts that are already known by many surveys which you gentlemen have on your desks today.

MR. BLAKEMAN:

D. Blakeman.

The wilderness people presented a brief in which they said they wanted specific areas of the province restricted and they specifically mentioned snowmobiles. It was our intention to bring to the podium our feeling that we don't want restrictions against anybody. We just want normal access. In truth, some of the areas that were mentioned are our prime snowmobiling areas. Therefore there is a conflict of interest in particular areas.

Somewhere in the concept of snowmobiling there is still the misconception that - and as I mentioned, I'm getting a little long in the tooth - snowmobilers are intent on driving their machines madly up to the top of a hill. I think Mrs. Fakeley made a very good point when she said that these machines are expensive. They get us from one spot to another. They are not bulldozers. The badge of merit type of thing where we win a prize at the top of a hill doesn't appeal to me.

In regard to winter wilderness use, I have travelled into the back country on my machine for many years and I have never, beyond the eight mile point, seen any backpacker, snowshoer, skier or even their tracks. Something has happened both here in Alberta and in British Columbia. For example, cross-country skiers in the Prince George area asked some of the local snowmobile clubs to run through certain areas for them so they would have trails to ski. In areas where I have never seen a ski track, the second time we go in there are ski tracks



on our tracks. It's an opening up process. What I'm really saying is, why are you so intent upon saving an area for something you will never do?

In this same context I wish to reply to the individual who wants to have solitude. For some reason there is the impression that at 8:00 in the morning we start up these machines, drive them like mad all day long and never stop. But I've tried to make a point to you people. We could travel 20 miles. Once we have travelled these 20 miles we stop and have picnics or gatherings. This is the type of thing we do. So I want to get rid of the misconception that somehow we ride forever as if we were on the streets of Chicago. We don't run snowmobiles forever. They don't run that long.

MS. GAWLAK:

M. Gawlak.

I want to comment on snowmobiles. We have heard from people who say that studies in this country and in the United States indicate that snowmobiles don't do any damage. I don't know these areas. But I have been to the Blackfoot grazing preserve, just next door to Edmonton. Last winter I saw the trails on which snowmobiles move, but I also saw the areas where snowmobiles get off the trails. They go from marsh to marsh, breaking the shrubs and the young trees. I suggest that members of snowmobiling clubs go to the Blackfoot grazing preserve next winter to see those tracks.

I live in Fort Saskatchewan and next to my apartment building there is a field. I resent the noise of these constantly whining machines. I resent them when they go to the Blackfoot grazing preserve. The beauty and quiet of the winter landscape is shattered by the noise they create. Mr. Blakeman says he only rides for 20 miles and then stops and has a picnic. That's fine. But not all snowmobilers keep to his style. There are some snowmobilers who constantly use their machines.

He also mentioned that beyond the eight mile point he doesn't meet any cross-country skiers. But can he imagine how many snowmobiles the cross-country skier has to suffer when he is actually past this eight mile strip in the wilderness beyond?

MR. CROWN:

Peter Crown.

I cross-country ski and I have to agree with the comment that it is quite helpful to have a snowmobile track on which to ski, especially when the snow gets a little wet. However, I'm in a bit of a quandary because, as the last lady said, I'm not crazy about the sound when I'm out skiing. But that's probably one of the things all of us will have to put up with in some way or another.

I consider myself a conservationist, an ecologist or an eco-freak, whatever you wish to call it. We hear a great deal of talk today on the environmental impact of industrial development in the foothills. Some speakers have been putting forth the argument that areas should be set aside for hiking, trail riding and related activities. My question is, are people who participate in those types of activities concerned with the impact they are having on the environment as much as they are concerned with the impact that somebody else might be having on the environment?

I'm not trying to fault anyone, but I would ask you to look on page 802 of the June issue of the National Geographic. There is a scene described as a soggy, wet quagmire caused by horse traffic and foot traffic along the Great Divide trail in the Rocky Mountains. The same type of situation was described in the report on the Great Divide trail conducted last year. So I just don't want the kettle to call the pot black, or vice versa. I think everyone should be concerned about the environmental damage they themselves might be inflicting.

MR. KYLLO:

I feel I should respond to that question, as I'm probably the only representative here of the AWA. We are very concerned about the other uses of wilderness areas. We recognize that horseback riding can be very detrimental in certain areas. Activities like this have to be looked at very critically. With regard to litter, I should point out that a group of boys indirectly connected with the AWA went into Pinto Lake last year and packed out over a ton of garbage that had been accumulating for about 40 years. We recognize the problem and we feel that things can be done to remedy it. Pack out what you pack in is the motto that seems to be the most realistic.

I think we must have certain management criteria to protect these areas. Any areas that are designated will have to be scrutinized very carefully. When problems do arise management techniques can be brought in to remedy these. I think perhaps that will allay some of the hesitations you might have.

MR. WHISTANCE-SMITH:

Ron Whistance-Smith.

Mr. Dowling has already identified the problem, but I think we'd better stop referring to 200,000 users in this province based on 3.2 persons per machine. I think perhaps we can scale that down considerably when we look at the number of families with 2, 3, 4, 5, and 6 snowmobiles.

Another thing concerns me and I think it is a very sensitive subject. In his presentation, Gordon Peel used a tactic which I don't like at all. Gordon, you linked the Smallboy band's occupancy of the Kootenay Plains and their subsequent move from the plains with the possible depletion of the game resource in that area and then said it is now rumoured they are going to move again. I view this as a very bad tactic because what you have said has not been supported, despite the fact that we have had word of mouth reports that some kills of bighorn sheep have been rather large.

I could equally say it is rumoured that the majority of hunting and fishing parties spend more money on alcoholic beverages than on any other part of an expedition and that more time is spent in consuming these than doing what they claim they are there for. We could cast aspersions like this. I don't think it is at all worthy of you and I think you should retract that because you are a man who is very much listened to, in this part of the province at least and because of the seriousness of that type of accusation. After all, many hunters find themselves in that condition when hunting accidents occur.

I've been out in some of these rather sensitive areas with some of the people who have spoken here today and people who have been engaged in surveys designed to come up with recommendations to preserve these areas. Some of these people themselves can do more damage tearing around in four-wheel drive vehicles over sensitive sand

dune areas and whatnot than any group of Native people living in the area.

MR. PEEL:

First, I confess I do drink, and not only water. Secondly, I will make another confession. I'm a real nut on alcohol and guns and their incompatibility. I've lectured on this for many years.

Regarding my other tactic about the Smallboy band and where they have been, I think my figures came from forestry officials who had been in the area. I used their assumption and their figure when I said two to three big game animals per day. In one spectacular kill, which I believe even Mr. Kinisky saw, there were 11 sheep. You say they have moved from the Kootenay Plains but they were in the forest reserve at that time.

This was a very fine line, this forest reserve; what does the term forest reserve mean? I think you will find in the Kootenay Plains the Indian band could have been moved out because of The Forests Act. They are now at Muskiki Lake, just outside the forest boundary and it is debatable whether they could be moved from there. But as I understand the forestry act, neither you, nor I, nor anyone else can settle in the forest reserve for more than 30 days nor establish any camp lasting more than 30 days without being moved out.

On the third remark for which I was criticized, that these people are considering moving to another area, we got that directly from one of the band members.

MS. BENNETT:

Joan Bennett, also speaking on behalf of the youth hostel proposal.

I lead a Ranger group in the southwest corner of the city. Girls of 14 to 18 are associated with the Girl Guides of Canada. I've been youth hostelling both in England as a teenager and here for some years.

I would like to support the proposals of the mountain region for the string of youth hostels from which one could cycle from Grande Cache to Waterton. But if I were to use these hostels for cycling, I would like the road paved. My skin is too precious.

However, I feel that if the hostels were built bordering close to the junction of Jasper and Banff parks, even before the road was paved you would be able to extend some of the very pleasant hiking trails from Highway No. 93 that currently go as far as the passes. You could extend them for a one-way backpacking trip. To start with, that would lead to more usage than you could expect from the cyclists.

I would like to suggest some of the trails be cut to come out within a mile or two of the proposed hostelling sites. If somebody is going to park a car, walk in half a mile and walk out, it doesn't matter where the exit of the trail is. But if someone is on a one-way trip and coming out very tired and looking for the youth hostel, it's nice to find it reasonably close.

The people who presented the briefs on snowmobiling have admitted that most of the research was done in the U.S.A. which is not necessarily a fault, but the following two points are worthy of note:

Yellowstone Park, I believe, has many snowmobiling trails along the paved roads which are not open during the winter.

In the provinces of Quebec and Ontario and the states of New Hampshire and Maine the snowfall is so heavy that the snowmobiles would be far less likely to stray from the specified trails than on the drier eastern slopes where the snow cover would be much less.

MR. FACKRE:

Don Fackre, Northwest Voyageurs Club.

I'd like to correct Mr. Blakeman's statement that we are asking for exclusive rights for our proposed canoe campsites. The Northwest Voyageurs are not asking for exclusive use of these camping shelters. Any traveller along the rivers would be able to use these. They would be unlocked shelters similar to the roadside campsites that now exist in the province. I'm sure snowmobilers would be free to use these when the rivers are frozen.



**LAND USE**  
**and**  
**RESOURCE DEVELOPMENT**  
**in the**  
**EASTERN SLOPES**

**EDMONTON**  
**JULY 6**

**ENVIRONMENT CONSERVATION**  
**AUTHORITY**  
**ALBERTA**





BRIEF  
ON  
LAND USE AND RESOURCE DEVELOPMENT  
IN THE  
EASTERN SLOPES  
  
PRESENTED TO  
THE ENVIRONMENT CONSERVATION AUTHORITY  
ALBERTA

Prepared by  
The Canadian Nature Federation  
46 Elgin Street  
Ottawa, Ontario K1P 5K6

Presented by  
T. Mosquin  
Edmonton  
July 6, 1973

I first want to congratulate the government of Alberta for making it possible for the Environment Conservation Authority to conduct this tremendous experiment in public participation. We feel that because of the increasing complexity of the world in which the ordinary citizen lives and the increasing tempo of his life, governments at all levels need to develop policies that permit and foster various kinds of public participation in the decision-making process. It is no longer sufficient in our view to simply elect a government and then let them go their own way for the next four years; new kinds of citizen involvement seem to be needed in today's world. While these foothills hearings are being conducted in Alberta by only one government department, I would hope that other departments have observers here so that the government of Alberta might work toward formulating a general policy on this subject which would be applicable to all departments, agencies, boards and commissions. Without such a policy, initiatives such as this one might well fail because of inconsistencies among different branches of government.

I think that nearly everyone agrees that participation is desirable, although no doubt there are limits to the usefulness of participation. However, we feel strongly that in today's world more governments should move with some deliberate speed to gain practical experience and define the areas and methods by which citizen involvement in decision-making can become a practical reality.

The Environment Conservation Authority is not the first department of government to conduct a major experiment in public participation. Parks Canada has done this for many National Parks; the Ontario Ministry of Natural Resources has done this for two of their Provincial Parks. This small body of accumulated experience can be an important aid in formulating the guidelines for a general policy. I hope that these experiments will be analyzed and evaluated and compared to the experience of some other countries so that our governments can learn new methods of becoming responsive to the wishes and needs of individuals and communities.

I would now like to tell you about the Canadian Nature Federation.

The CNF was formed in 1971 out of the Canadian Audubon Society. The Federation was formed in response to a need in Canada for a national voice specifically for naturalists but generally for all people to whom nature and wildlife are very important values. We have direct members and affiliate members. Only one and a half years ago our direct membership totalled 1,800; today it is over 9,000 and continuing to increase rapidly. So, we are perhaps the fastest growing citizens' organization in Canada. In addition to speaking for our 9,000 members, we represent about 100 provincial naturalists' federations and local societies, one or more in nearly every major town in Canada. The Federation of Alberta Naturalists is our provincial organization in this province; the Alberta Federation appoints a director to our national board. Under the FAN there are 7 local Alberta societies. This is the way in which the CNF is structured in almost every province.

The rapid growth of the Canadian Nature Federation, in our view, is due to the fact that there are thousands of good people out there who feel that governments are not adequately looking after their interests in protecting the priceless assets of the environment; these people turn to us to speak for them. As I have already indicated, our main concern is to ensure that the worth of natural and clean environments as elements of our collective natural heritage are better appreciated by the government. Governments themselves have recognized that values are changing and are restructuring their departments to deal with environment. This response of governments, both provincial and federal, will, we hope, continue.

It is important to point out that the CNF is not a pressure group in the sense that such groups represent mainly the interests of only a certain number of people; rather we consider ourselves to be in a somewhat special category of representing a set of certain values centering around nature which are held by nearly all people. Our concern is that these values be spoken for and that they be spoken for in places where decisions are made. We see our organization as playing a strong role in portraying wildlife and the natural environments of Canada to people who have not tended to think much of nature as part of the cultural heritage of the country. The

CNF now publishes a national magazine, Nature Canada, and I have circulated copies to members of the Environment Conservation Authority. Nature Canada gives you a pretty fair idea just what the Federation represents.

The Federation's interest in these hearings stems from the fact that the foothills are of national importance and their future is of concern to people in all provinces and territories. Also, this overall planning approach will surely be applicable to other regions of Canada. Indeed we feel that these hearings, should they produce a grand master plan for this vast, complex and beautiful region, could be of historic importance to the growth and orderly development of Canada. Unique natural features such as species, landscapes, clear waters and ecosystems that are functioning beautifully and productively today cannot easily be brought back.

Our view of priorities is determined to a large extent by the fact that we feel long-term considerations should take precedence over short-term ones such as non-renewable resource extraction and road or dam building. If we were explicitly to identify our priorities with regard to establishing a long-term plan for the region, they would be as follows in order of importance:

1. Adequate protection for the natural environment.
2. Promotion and development of recreation in ways that do not seriously impair the basic productivity or beauty of these lands.
3. Regulation of resource extraction and other industrial development that could do great damage to the natural environment and to recreational potential.

I want to make it absolutely clear that CNF is not categorically against resource extraction. On the contrary, we are very much for non-renewable resource extraction when reasonable consideration has been given to environmental protection. But we know that many people are making strong cases to the effect that quick resource extraction should have prior consideration. However, we maintain that important social values are at stake here and should not be sacrificed for the sake of expediency. Thus the ECA should make sure that in its decisions, more of valuable

social worth is not being lost than is being gained. Many but not all people tend to always see the gold very quickly and this characteristic of man has to be carefully regulated by society. I re-emphasize again that our suggested priorities for long-term planning are (1) the environment, (2) recreation and (3) resource extraction.

Flowing from these priorities, we wish to offer twenty recommendations to the ECA. It is, of course, impossible in this limited time to go into any detail and to talk about specific places. Our recommendations are therefore, of necessity, general in nature. In making these recommendations we know that some of them may already be a part of government policy today.

#### RECOMMENDATIONS

1. We feel that the government should consider the possibility of expansion of one of the mountain national parks to include a representative section of foothills. The foothills are not at present under this high form of protection anywhere.
2. We feel it is urgent that the government establish a network of ecological reserves representative of typical and unique natural environments of Alberta. I am pleased to pass on to this committee copies of the Ecological Reserves Act recently passed in British Columbia and which we republished in the first issue of Nature Canada last year. This initiative by the B.C. government has set a model for other provinces to follow.
3. We feel that substantial buffer zones around National Parks are essential, especially in places where big game migrates outside park boundaries. Except where transportation corridors already exist the width of the buffer zone should be a minimum of ten miles; in any new corridors development should be absolutely minimal within the 10 mile distance. We are particularly concerned with large developments immediately adjacent to National Parks, such as the proposed Assiniboia development, for example.

4. We feel that there should be adequate management of wide-ranging mammal and bird populations in those areas where it is not possible to set up reserves that are large enough for complete ranges. Management must be for both consumptive and non-consumptive use.
5. There should be a co-ordinated plan for research on natural communities involving government, universities and co-operative amateur effort.
6. There should be environmental education facilities along major routes for school visits and weekend family use. We suggest one residential centre for advanced undergraduate and adult courses.
7. We feel very strongly that future proposals for water impoundments and diversions should be justified by complete cost-benefit analyses and that public hearings should be held before final decisions are made. Let me expand. We know that many dams and water impoundments have not been adequately justified in the past. The need for flood control is frequently exaggerated by engineers and various empire builders. Flood control is not needed if there is proper riverside land use planning downstream. We now know of many examples where, if environmental, social, and perhaps economic costs of dams and dam building were taken into account, the electrical power generated at the dam site could in no way be considered to be "cheap". The free-flowing rivers cascading down the Rockies' foothills are one of this province's great treasures. To permit narrow interests to dam more of these rivers when there are alternatives would be wrong. We understand that Alberta now produces the bulk of its electrical energy by reasonably managed coal plants. Coal plants cause, in our view, far less damage to the basic values of society than the damming of more rivers.



The next nine recommendations cover recreation. Almost all recreation is dependent on an attractive natural setting and not all forms of recreation are compatible with each other. Hence an overall plan is essential.

8. A limited number of scenic roads rather than superhighways should be built to an appropriate standard. Any new roads should not be through routes. Some roads and trails should be up-graded, others closed.
9. There is a need for many more small campsites and provincial parks throughout the foothills.
10. There should be established wilderness areas in different places large enough to preserve the wilderness character. These wilderness areas should be scattered all along the foothills. Some would overlap with ecological reserves and will be "strict wilderness". Others should be "recreational wilderness" allowing limited camping, foot hunting and fishing.
11. A network of planned trails for foot, horse, bicycle, ski and snowshoe travel with simple hostels at intervals is the best means to provide close access to countryside for many, without excessive damage. There is of course a need for separate areas for snowmobilers who should not be allowed free use of foothills with their machines. Use of snowmobiles should be tightly controlled while all-terrain vehicles should be generally illegal. Interpretive trails will be important, linked to education centres, campsites, parks, etc.
12. Water routes (some on designated wild rivers) will be needed for canoes, rafting, etc., with campsites at intervals. There should be a few places for boats with restricted horsepower. Recreational flying also should be controlled.
13. Commercial development should be allowed in suitable areas only where it does not conflict with the more basic and permanent values of the land. Commercial developments should

generally be small, scattered, screened by trees, and appropriate. For example, small motels, guiding, horse and boat hire, river cruising, vehicle service and restaurants. Sites should be leased only. There should be maximum benefit to the small businessman and native people.

14. Large commercial developments may be tried if suitable areas are available but only after all other needs have been determined. The government should designate suitable places and then lease.
15. We feel that the service industries in education-recreation are of long-term importance. The most appropriate economic uses of vast regions are well-managed grazing and sustained-yield forestry; these activities can continue as at present with tighter management to minimize abuses, especially pollution from pulp mills and the careless construction of roads and bridges over streams. Oil and gas exploration and extraction can proceed provided that no permanent harm is done to the natural environment. Existing use can continue with better controls on access and emphasis on reforestation. Quarrying and mining especially strip mining are most devastating. They should be seriously examined in terms of economic value to the province and the country. Rigorous controls should be in effect on all existing operations. Public hearings are absolutely essential and adequate reclamation should be a requirement to any approved plans.  
The last five recommendations concern procedures.
16. There is need to develop a mechanism for overall planning and this will involve other government departments as referred to earlier.
17. We would like to see a grand master plan prepared for the whole region after these hearings. This plan could then be submitted for broad public approval in principle through the ECA.

18. We feel that it should be the policy of the government to require environmental impact statements for all major developments; individual hearings should be held on such proposals.
19. Federal funds should be available for those developments which take pressure off National Parks.
20. We feel that there should be a special tax levied on most commercial developments in the foothills so as to support the administration of the overall plan. Another source of revenue for the master plan could come from leasing arrangements. In this way some of the money made out of this unique area could be returned to the benefit of all users of the area.

In conclusion, Mr. Chairman, I hope that the ECA will take into consideration our special feelings and expertise on matters concerning the natural environment.

Thank you.

## QUESTIONING BY THE AUTHORITY

DR. TROST:

Should improved cooperative machinery be established between the federal and the provincial governments in respect of developments in the eastern slopes, including the national parks?

MR. MOSQUIN:

Yes. It would be useful to establish new machinery, especially since the parks are so large and border such a large section of this province. The federal interest is very important with respect to the preservation of the natural environment of the parks. There are, no doubt, other important areas but it's hard to comment on them.

DR. TROST:

Your recommendation that the national parks should be extended to include part of the foothills certainly would require detailed consideration by the two levels of government.

MR. MOSQUIN:

Yes, actually it would require that the Alberta government approach the federal government. I think the initiative has to come from the provincial government for, as I understand it, the provincial government has to make the offer of the land. It could be informally discussed first, no doubt.

MR. KINISKY:

We have ecological reserves in Alberta. Are you talking about the establishment of additional reserves? What size reserves are you talking about and what ecological systems are you concerned with as far as preservation is concerned?

MR. MOSQUIN:

In British Columbia they passed an ecological reserves act. This made it possible for the government to designate for protection, by Order-in-Council in this case, many special areas of British Columbia's natural environment.

I visualize 20, 30 or 40 relatively small areas in these ecological reserves scattered about Alberta, including areas in the very dry parts of the province, perhaps some of the muskeg areas in the north. In other words, not only the wilderness areas in the foothills, not only that kind of environment, but many other kinds of environment. These ecological reserves should be relatively small, perhaps 15 square miles or less.

MR. KINISKY:

When you talk about your objections to building dams for hydro development, what are the feelings of the Canadian Nature Federation concerning the regulation of flows of rivers because of the vast differences between summer and winter flows? For example, when we look at the Red Deer River there is adequate flow for the needs of the city and downstream users during the summertime, but with decreased flow in the winter, the situation gets pretty critical. How would you feel about an impoundment to regulate these flows so there would be more water available during the winter months?

MR. MOSQUIN:

I can't speak for our board. If this were put before our membership I suggest they would prefer to see the Red Deer River flow free with no dams and that some alternate source of water be found for the town.

MR. KINISKY:

Are you generally in agreement with the concept of some of the wildland proposals put before us by the Alberta Wilderness Association?

MR. MOSQUIN:

I think it would be a general Nature Federation view that it's a matter of land and resource allocation. When the forest industry gets a long-term berth on a piece of land, that land is allocated largely for one use. Others aren't totally banned, but it's a matter of allocating land for that use.

I think that lands can be allocated for provincial parks. This shouldn't be considered as a withdrawal of land, but as a matter of allocating land for a particular use. As I said, I'm sure that values are changing and more and more people appreciate this kind of use, just as people appreciate getting cheap lumber.

MR. KINISKY:

What are your specific objections to snowmobiles?

MR. MOSQUIN:

This is an area of continuous static for us. From our average member we get more complaints about snowmobiles and their impact on wildlife than on any other matter. The objections stem largely from the fact that they interfere too much with my particular type of recreation. There is the noise factor and the presence of the trail. When you are walking through the woods and there is a snowmobile trail you know a snowmobile is going to come by any minute and it shatters your recreation. This is, perhaps, the most elemental level of feeling against snowmobiles. The wildlife question is an important one too. Whenever we read of snowmobiles being used to hunt wildlife, many people, including myself, get very upset.

So those are the two things. When a snowmobiler goes into the woods, he uses two square miles of space. When I go into the woods I use much less space. The other one, of course, is the impact on wildlife - coyotes and other forms of wildlife being chased and run to death. I think that is a serious matter.

MR. KINISKY:

Has the Nature Federation at any time ever catalogued the number of incidents of destructive action by snowmobiles, for example the chasing of animals and such activities to which you take special objection?

MR. MOSQUIN:

One of the best sources of information is a publication put out in this province concerning the impact of snowmobiles on the coyote population in the various parts of Alberta. This was published in

1968 or later, but there weren't many snowmobiles around at that time. There are many more now.

To answer your question specifically, no we haven't had the resources. We have to depend on other people and other sources for our information.

MR. KINISKY:

You said that you don't find grazing a problem in the foothills, yet we have had a number of people from the fish and game associations and others who have talked to us about the degradation of stream banks and siltation that result from grazing. What is your federation's position on grazing relative to the claim that it is destructive to the aquatic life?

MR. MOSQUIN:

I would like to put that question before our board of directors for discussion. I don't know what the answer is. Generally speaking, as I pointed out, grazing is compatible, provided you don't have overgrazing.

954-1

LAND AND WATER RESOURCE DEVELOPMENT  
IN THE EASTERN SLOPES

a brief submitted to

The Environment Conservation Authority  
Province of Alberta

by the

ALBERTA GEOGRAPHICAL SOCIETY

for the Public Hearings in Edmonton

Presented By: Dr. A. Laycock

JULY, 1973



## PREFACE

This brief has been prepared by Dr. Arleigh H. Laycock\*, Professor of Geography, University of Alberta, and President of the Alberta Geographical Society 1972-73. Much of the input is his but most of the points raised have been reviewed in executive committee and *ad hoc* (for the brief) committee discussions and in discussions with individual members of the Society. The draft of the text has been reviewed in whole or in part by members of the committees. It is recognized that a number of the views and comments expressed may not be in accord with opinions held by many members of the Society and it is hoped that a supplement to this brief may be prepared in which dissenting and supporting comments concerning this and other submissions may be presented.

---

\* Professor Laycock was Hydrologist with the Eastern Rockies Forest Conservation Board and Prairie Provinces Water Board before joining staff at the University of Alberta in 1955. His Ph.D. thesis was on land use planning on the Eastern Slopes and his university courses have included discussion of land and water management. In addition to research on especially water resource topics he directed the Canada Land Inventory mapping of "Present Land Use" for Alberta and served as a contributing editor of the Atlas of Alberta. The contributions of Fred Scholte (President 1973-74) Julian Nowicki, Ron Whistance-Smith, Bruce Proudfoot, and other present and past executive members of the Society are appreciated.

## A Introduction

When this brief was initially planned our intentions were that a number of principles and procedures concerning multiple-purpose management in "wildlands" would be reviewed and several illustrative regional case studies would be presented. Points would have been raised relating to the changing environmental assessment and demand patterns and the evaluation procedures both in use and that might be used. Some stress was to have been placed on the geographic diversity of the broader region, the wide range of demands that must be accommodated and the much more limited range of uses that are suitable for specific parts of it. Some of the geographical relationships that are important in limiting local choice would have been illustrated in the case studies. We anticipated that watershed aspects might be almost ignored in most briefs and wished to stress the importance of watershed in evaluation - the importance of downstream demands, the very different types of demand within and outside the region and the variations in prospects for damage with other uses and for improvement with management.

Our objectives in preparing a brief have been modified with the receipt of a number of information bulletins, background papers and briefs. Many of these publications are excellent as far as they go but most don't go far enough. Many of the points we had intended raising in our earlier discussion have been raised. We will now attempt to give emphasis and illustration to some of these and raise other issues that develop from them. In addition, we will comment on some of the materials and proposals presented, partly to illustrate some of the concepts discussed for specific areas. Specific positions have been taken on many issues and arguments for several alternatives have been expressed on others. More information is needed on most but this may serve as an expression of at least some of our points of view and as a basis for further discussion.

## B MAJOR ISSUES IN LAND AND WATER RESOURCE DEVELOPMENT IN THE EASTERN SLOPES

### 1). Assessment Procedures

a) One of the most difficult tasks in assessing a region for various uses, some of them presently or potentially conflicting, is to develop procedures in which equitable assessment of unlike uses may be made. Demands vary greatly from one area to another within a complex region such as this and they change appreciably through time. Similarly, there are major differences in the capacities of different areas to respond to management in the production of goods and services - in each type of use.

In the capital period of the Eastern Rockies Forest Conservation Board (to 1955) there were many staff and other agency discussions concerning the need for overall planning. Problem analyses similar to that of Wilm and Dunford (1941) for the Eastern Slopes in Colorado were suggested but the major problem of integrating management was never adequately faced and several separate inventories of the range for commercial grazing, the forest cover for lumber and pulp production and some aspects of watershed were conducted. The stress was on traditional uses, with undefined "allowances" for watershed protection and major restriction upon non-revenue producing recreational use. Mining exploration and development was handled by a very separate government department. Integration of traditional uses with non-Reserve areas was considered important but there were no studies of demands from outside the Reserve concerning what watershed, recreational and other services might be needed. This pattern of limited study prevailed for most of the following years but a significant separate program of study was initiated a few years ago by the Provincial Government.

b) Foothills Resource Allocation Study

Some of the initial products of this study program are becoming available - e.g. in "The Resources of the Foothills", a background paper of the Conservation and Utilization Committee Task Force on the East Slope Hearings. These and future materials of the "Study" are very important because there is already a major reliance by planning agencies upon them and this will grow. Much of the work done is excellent but there are dangers that shortcuts will be taken in reaching conclusions and that a number of important steps in planning will be ignored by users and possibly in the study program because of desires for early completion.

In some of the earliest materials to be released a comparative assessment of site capabilities for various uses in much of the Forest Reserve is stressed. The "physical supply of resources" has been assessed for quarter-section units in five categories for each of a number of uses according to "the ability of the land to supply the resource." The recognition of local variation in environmental capacity to supply goods and services in different use categories is a very important first step in comparative assessment. The next step of arbitrarily assuming that the five rating categories for each use will be of equal value to society as the five rating categories of each other use is an interesting exercise in map integration. With or without weighting, the best environments for "forest capability" tend to be very different than those that are best for "grazing capability" etc. and the resulting composite maps appear to be deceptively easy bases for land use allocation. Some preliminary land use maps based on such procedures have been produced but these are open to devastating criticism if they are based on little else. Most of these steps are useful but they must be accompanied by many others before valid planning maps may be prepared - for a number of reasons.

c) Choice of Use Categories to be Assessed

In the Foothills Resource Allocation Study summary tables in Appendix A of "The Resources of the Foothills" paper, fifteen use categories have been rated. This selection was arbitrary because demand studies have not been made for watershed and other use categories. Four wildlife categories are included - "Ungulate," "Sport Fish" and "Water-fowl" Capability and "Key Range." In contrast, "Recreation Capability" and "Watershed Condition" are undivided. Recreation might well have a dozen or more distinct categories based upon different demand requirements including for sightseeing, hunting, fishing, picnicking, hiking, skiing, cycling, motoring, motorcycling, snowmobiling, sleighing, boating, mountain climbing, trail riding, bird watching, photography, etc. and each of these and others might be subdivided. Hunting and fishing are in part covered by wildlife categories separately - there is a partial overlap in use categories. In watershed management, objectives might include yield improvement, regime improvement, erosion limitation, sediment yield reduction, flood limitation, quality improvement etc. A number of these are contradictory - a good watershed for water yield may be a very poor one for fishing or picnicking. If equal value is given to top ratings in each identified category of use, the more use categories the better if the interests of any interested group are to be served. With four wildlife categories out of fifteen listed the end result will tend to be wildlife oriented relative to recreation or watershed with one category each.

The lack of defined objectives in management in each use field makes comparison difficult. The "Southern Foothills Region" is the major source of water for the major irrigation, hydro power, urban, industrial, recreational and other developments of Southern Alberta and Southern Saskatchewan and it is important to Manitoba for hydro power also. Watershed was given top priority by the Canadian and Alberta governments in the Eastern Rockies Forest Conservation Board Acts yet in this assessment only 5 percent of the

Reserve is rated good or excellent watershed and 95% is given a low or moderate rating. In contrast, approximately 50 percent is given excellent "Key Range" rating thus with an added strong assessment for "Ungulate Capability" the end assessment is that wildlife management should be dominant. If management objectives have not been defined for either watershed or wildlife, how can this striking shift in management orientation be meaningful or acceptable?

d) Measurement Standards

If world-wide or even nation-wide standards of measurement of site capability were to be available it might be more realistic to equate the top category of one use with the top category of another. However, by world and national standards, this region has great departures from optimal conditions. The glaciated alpine topography of some areas is strikingly beautiful by world standards but this relatively cold environment with widespread bare rock has very low forest and other vegetative growth rates. With severe droughts and related fires in some years, severe winters with high casualty rates and other limitations, this region cannot be given a high rating for forestry or grazing and the carrying capacity for ungulates and other wildlife is extremely low. A case can be made for protection of some slow growth areas but productivity must still be a criterion for many (timber production, range carrying capacity, ungulate supply for hunting) and despite these limitations, unrealistic good and excellent ratings are given for wildlife for vast areas. In contrast the standards used for some other purposes are relatively conservative. If a system of having proponents for each use were to be used, quite different ratings for recreation and watershed categories and other uses might be assigned.

In practice equal ratings for the top categories of each use are very unrealistic. Harold Wilm has suggested that the respective values of grazing, forestry, watershed and recreation are \$2.00, \$20.00, \$200.00, and \$2,000.00 per acre per year for the Eastern Slopes in National Forests



in Colorado. There is a high level of subjective judgement involved but vast differences have been recognized by many authorities. With this scale, recreation and watershed would be dominant in virtually all areas. Perhaps they should be, but this is largely a matter of what values society attaches to different goods and services. For example, if we start with an assumption that recreational use in the "Northern and Southern Foothills Region" is worth only one percent of that suggested for Colorado, i.e. \$20.00 per acre per year, then using the weighted capability totals for excellent, good, moderate and low ratings for ungulates and key range, each ungulate would have to be worth \$4,250.00 per year of presence within these areas. A mature buck of 10 years of age would have been worth \$42,500.00 in the decade. If we compare excellent ratings for recreation and ungulates plus key range, each animal would have to be worth \$167,000.00 per year. It is doubtful that very many persons in our society would assign values such as this to wildlife - yet this is the result of this type of assessment. What values are realistic? This may vary with the ungulate species, but over half are deer. For mule and white-tailed deer that are relatively abundant elsewhere, relatively low values might be assigned. For mountain sheep and goats and other species in short supply, although probably not endangered even with other development, higher than average values might be assigned - although the presence of refuges in nearby national parks might make the need for survival here less urgent. Better comparative value measurement and estimation should be possible for these and other uses. The literature is full of examples. If integrated maps were to be prepared using different assessment levels and certain areas still remained predominantly in specific categories, much stronger cases for management foci (upon thus - defined prime uses) might be made.

e) Assessment of Environmental Damage and Enhancement

One of the major reasons why we should not move directly from an initial rating map to evaluation and management plan development is that



there is little indication of the effects of management for one use upon other uses in this rating. It is useful for us to know what the site capabilities are for single uses but it is more useful to know what the site capabilities are for various use combinations. Accordingly it is necessary that we know to what degree the various uses may be competitive with and/or complementary to each other. To know this it is necessary for us to know the degree to which a use may suffer damage or reduced production of goods and services as a result of other uses being present. It is also necessary that we know what the potential may be for site enhancement or improvement with management, directly and as a result of other use of uses.

To illustrate, in evaluating an area for watershed purposes we must determine our objectives in each of a number of categories - water yield, regime, erosion, flooding, sediment yield, quality etc. - for each of these categories in terms of potential damage and possible enhancement. If the watershed is in poor condition in any one or more of the above characteristics relative to downstream and local demands, we should determine how it might best be improved and what the effects of these improvements (e.g. encouragement of growth through fire protection or grazing limitation, artificial storage, phreatophyte removal) may be upon other uses. We should study other uses in similar ways and see what compromises are possible in each area. Alternative courses of action might be identified and decisions made for long-term planning.

Assessments of the potentials for environmental damage and enhancement are more significant stages in mapping for multiple use management than assessment of the comparative values of single uses. For example, if we find that deer populations may be relatively unaffected or possibly increased as a result of other use there is little reason to manage an area primarily for deer production and exclude other uses. The state of Pennsylvania with over 40 times the population density of Alberta has a greater deer population now than it probably had 300 years ago. In addition it apparently has a greater deer population than Alberta; environmental limitations are more important in this case, and to varying degrees in others, than pressures by man.

## 2) Multiple Use

### a) Use Accommodation and Zoning

It is anticipated that this region will be managed to accommodate as many of the needs and as wide a range of needs of the people of Alberta and other areas now and in the future as is possible. This does not mean that we should attempt to accommodate all demands for use in all areas. For the greatest response in goods and services (including quality of need satisfaction) it is necessary that zoning of uses be undertaken and that use priorities in specific areas be established. As far as possible, these should be flexible rather than rigid and the zoning should not be as much for specific exclusive use as for protection of certain uses by restriction upon certain competitive uses. Thus if it is desired that wilderness use be present in a specific area it should not be zoned wilderness but certain uses that might subtract from the area being a wilderness might be restricted in their development. Most other non-competitive and only slightly competitive uses might continue to be present in much if not all of the area. Similarly, there might be almost general exclusion of motorcycle hill climbing or snowmobile cross-country racing activities, but in certain areas where damage done to the environment and to other uses might be minimal they could be permitted. Such areas should not be zoned exclusively for these uses - other visitors might be free to sightsee etc. as they wish. With such areas the demands of significant groups in our society might be met and a better rationale for excluding their competitive activities from other areas would be established.

### b) Use Priorities

A system of use priorities should be established for areas in which use competition is present or is in prospect. The term "prime" is sometimes used but a wider range of terms is recommended. Examples might be:

"dominant and exclusive"	(eg. a residence in a corridor zone)
"dominant"	(eg. to have top priorities in management - eg. watershed)
"co-dominant"	(to share top priorities in management - eg. watershed and recreation)
"subordinate but non-competitive"	(eg. wildlife in a sight-seeing recreational area - in some cases these might be co- dominant)
"subordinate and moderately competitive"	(eg. commercial grazing in a watershed oriented to regime improvement - strong limitations on use may suffice and this use might well be dominant or co-dominant elsewhere)
"subordinate and highly competitive"	(a cattle bedding ground in a camp shelter area - fencing or other correction mea- sures needed)
"noxious"	(a generally undesirable use but still needed by society - very locally it might be "dominant and exclusive" but its loca- tion will generally be where little other use is possible).

Other terms and categories can be used but the identification of each use in each area is useful.

The major use categories should be sub-divided according to specific demands. Terms such as recreation, watershed and wildlife mean relatively little until they are. Alternative objectives in addition to multiple objectives should be recognized. For example, for some wildlife managers the "best" environment is the natural one, with all of its limitations. For others there is merit in supplementing ungulate feed supplies in particularly severe winters if the habitat is otherwise more than adequate to support the numbers present. This could be more oriented to the needs of hunters but such needs are recognized and strongly held by many people and no one approach should prevail in all areas. In some situations, controlled burning or clearing is suggested for browse productivity increases and other measures can also be helpful.

Extractive industries can have very high productivity per unit area but exploration has progressed far enough now that both further exploration and development could be limited in time to specific areas. When the resources of these areas have been depleted and the sites have been restored to acceptable levels, new areas might then be opened up for development. This practice would result in greatly reduced negative side effects and the production levels would not be greatly affected. Marginal operations could be inhibited or stopped where environmental damage is significant and royalty revenues etc. are not great enough to compensate.

Some types of development are not directly self-sustaining financially, yet they are beneficial for society as a whole. Recreation, watershed, wildlife and other management largely or wholly are in this category. User-fees could be charged in more ways than at present but other means of assessment of their worth to society are recommended so that management oriented to them may be justified. With reasonable justification, wider services development (e.g. recreational roads) is recommended. These services can be very important in their effects upon the locations and intensities of different types of use and in the establishment of use priorities.

#### c) Complementary Development

It is anticipated that development within this region should complement rather than duplicate the development of adjoining regions. Mountainous terrain occupies over half a million square miles of Canada to the west and northwest of this region but the demand pressures and environmental capacities to satisfy demand are by no means equally distributed, (this region is less than 5 percent of the total). The pressures for intensive recreational use are greatest here and in southwestern British Columbia because of proximity to larger populations, better access, the change from dissimilar terrain patterns (i.e. the plains people enjoy contrasts), earlier development etc. It is realistic to expect that the more intensive recreational activities will be present in these areas and

the less intensive activities will be present in the more remote areas of the Western Cordillera. This is already largely true, with the exception of parks patterns, and with parks policies becoming much more restrictive it might be expected to become more true. If the parks are to become increasingly wildlife and wilderness oriented in most areas we should expect that other needs will be served increasingly outside the parks.

Similar approaches may be taken concerning watershed and other uses. The Western Cordillera is a major water source but only the flow of the North and South Saskatchewan Rivers and their tributaries passes into extensive, relatively dry plains in Canada. The importance of this flow will be noted in the next section of this paper but it is such that a much greater stress must be placed upon watershed management in this part of the Western Cordillera than in any other. If there are similar conflicts between watershed and forestry, watershed and grazing, watershed and wildlife or watershed and any other use in other parts of the Western Cordillera it may be possible to resolve them in favour of other uses elsewhere. In this region, watershed considerations must be given prime importance and other uses should not be permitted to subtract substantially from the achievement of watershed management goals. Parks policies are oriented to other objectives but as long as fire prevention is stressed in parks management and our watershed needs are primarily for regime improvement these objectives are complementary. In the future if we will need greater water yields and more artificial storage, the burden of such demands will fall largely upon this region.

The principle that the uses of this region should complement those of adjoining regions, so that a wider range and greater proportion of all needs may be satisfied, can be applied to other uses also. In the Foothills Resource Allocation Study, great stress is put on management to meet the needs of ungulates. If the region were a productive supplier of ungulates or some species were in danger of extinction and management for other purposes resulted in major reductions in numbers, this might be reasonable. Instead, this region has a relatively low productivity and management for other purposes can have, in some cases, positive effects upon numbers.

As for survival of species, mule and white-tailed deer, now constituting over half of the ungulate numbers present in the region, are numerous in the plains to the east and northeast and elsewhere. They will do well within the region whatever the management and need little special protection or help. The moose also appear to need little protection in terms of relating exclusive land use management and are more abundant elsewhere. The elk need more help and can get it in complementary management programs. The caribou are relatively rare but special preserve development isn't as needed as other assistance in critical years. The mountain sheep and goats are not as large in number as in park areas nearby and in British Columbia to the west. There are better areas elsewhere plus in the wilderness areas already established in this region for protection of the species. With reasonable management largely for watershed and other purposes there should be little decline in numbers. It should not be an overriding purpose of management in large areas to preserve present numbers of ungulates in all areas. Natural re-growth of burned-over forests and many other changes will result in changes in distribution patterns. If complementary land use with adjoining regions is considered, the need for management of large areas of this region for ungulate protection has been grossly overstressed. A good perspective outline of the several objectives in wildlife management in this region is badly needed. Most papers on wildlife preservation are of little help.

A strong case for commercial grazing within parts of the reserve in the south can be made. Historically, summer grazing of their livestock within the reserve has been very important to ranchers to the east. With changing priorities we may anticipate a slow decline in numbers and better distribution control - but the recent increases in beef prices may result in new pressures for beef production. Alternative production elsewhere should probably be stressed. In areas to the east of the reserve in Central Alberta there is still a good potential for expansion.



### 3) Watershed

#### a) Downstream Demands

The forest reserve and mountain park areas have only 13 percent of the area of the North and South Saskatchewan River Basins yet they supply approximately 87 percent of the flow of these rivers in a dry year (calculations were for 1948-49, Laycock 1954, 1957, & 1965). Much of the remaining flow originates in adjoining foothill areas. In wet years the proportion of the flow originating within the plains and foothills is still well under one-third of the larger total. In addition to being much more dependable, the flow of mountain rivers and streams has a better regime pattern (still not ideal) relative to irrigation and other demands and it is of much better quality. The streams originating in plains areas flow for short periods in March and April of most years when winter snows melt and during and following heavy rains that occur in some years, usually in late spring or early summer. The flow is flashy and turbid and is not as dependable or seasonally useful as that of mountain areas. Foothill and forested plains flow is intermediate in character - still flashy and turbid and early but much better than that of the drier plains and many of the streams have at least some flow through most of the year.

The importance of the flow from this region in domestic urban and industrial supplies in the Prairies is indicated in part by the fact that Calgary, Edmonton, Regina, Saskatoon, Moose Jaw, Lethbridge, Red Deer, Medicine Hat, Grande Prairie, and many other cities and towns are dependent upon this source for their water supplies. The major irrigation projects of the plains including the Eastern Irrigation District (centering on Brooks),



St. Mary - Milk River Development (Lethbridge, Tebu, Bow Island, Coaldale, Raymond, Magrath etc.), Lethbridge Northern District (Picture Butte), Western Irrigation District (Strathmore), United Irrigation District (Hillspring and Glenwoodville) Bow River Project (Vauxhall), South Saskatchewan Districts (Outlook & Saskatoon) and many of the smaller ones are dependent upon this source. The major hydro-power projects of Alberta and to a lesser degree those of Saskatchewan and Manitoba are dependent upon this source. Our industries are largely in the larger centers where river based water supply systems provide water - largely from this region. Our packing plants, steel plants, chemical plants and refineries, breweries and many others are large water users. Gas processing plants, potash mines, oil and gas wells in drilling and water injection stages, salt plants, thermal power stations and many others are important users of water, increasingly of mountain and foothills origin. Recreational developments on rivers and reservoirs, commercial fishing, "Ducks Unlimited" developments using irrigation return flow, stream stabilization (e.g. Willow Creek, Mosquito Creek, Qu'Appelle River and the Little Bow River) and a host of other uses of water in the plains are dependent upon these sources.

Would this water be available whatever the focus of management in this region? To a large degree, yes, but management can greatly affect water yield, flow regimen, flooding, erosion, sedimentation and various quality patterns and the costs of making supplies suitable for use, and of limiting flood damage etc. can be very high.

Water yields are currently adequate in the Southern Prairies if storage is provided but demands are growing. In Southern Alberta we have approximately five million acre feet of flow available in a dry year - but half of this has been allocated by agreement with Saskatchewan, Manitoba and Canada to downstream use. In dry years, irrigation and other demands are at peak levels - diversions now account for close to two-thirds of the flow available for use in Southern Alberta in our drier years. With present trends the demand curve will reach the supply curve in some dry year around the year 2000 (possibly earlier). We have some partial alternatives - greater efficiencies of use, storage from wet years, weather

modification, diversion from north-flowing rivers, shift industries out of the region, etc. - but as we approach full use of our allocation the problems of quality, legal rights, etc. become more acute and we become acutely aware of watershed management practices. Orientations toward the preservation of ungulates will then seem grossly inappropriate.

b) Management Objectives

The term "good watershed condition" is almost useless and it seems to have been applied to high yield areas (in the Foothills Resource Allocation Study) rather than to management problem areas thus it is also misleading. It is much more useful to define watershed objectives and see what can be done about them - both through damaging misuse and improvement measures.

Water yield increase is often considered by laymen to be the major objective in management. In the Eastern Rockies Forest Conservation Board Act it is stressed. It would be possible for us to obtain perhaps 10 to 20 percent more water from the Eastern Slopes by burning off almost all of the vegetative cover - but the flow regime, flooding, erosion, sedimentation and quality problems would be extremely great because much of this flow would be in flashy, turbid floods following earlier snow melt and each heavy rain. In practice this region is yielding greater than average amounts of flow because of past fires. As forests mature, we should anticipate that regional yields will decline (perhaps by as much as 5 percent) because of the greater transpiration of moisture by plants with more deeply developed root systems. With fire protection, assisted in part by the Eastern Rockies Forest Conservation Board, we are decreasing rather than increasing flow from the Eastern Slopes.

This is good. We don't currently need more water as much as we need better seasonal distribution of flow (flow regime improvement) and the reduced flooding, erosion and sedimentation and improved qualities usually associated with it. We may need yield increases in the future

and some forests will then be in better condition for cutting than they are now. We might limit use of water by phreatophytes in some areas (in Southern California this is stressed) and employ various cutting techniques etc. that contribute to snow drift concentrations and higher yields but in general we cannot expect to greatly increase flow by watershed management. Our environmental patterns, especially climatic, are not such that we have a potential for much increase and we should focus primarily upon other objectives that we can do more about.

The natural flow regime patterns vary from back range areas which have a spring and summer meltwater flow following heavy winter snowfall (summer rains are light), to foothill areas which have lighter and more variable winter snowfall, earlier spring melting and runoff from it and from some of the heavier spring and summer rains. Late spring and early summer flows are high but flow in late summer, fall and winter is relatively low. The back range yields are greatest but the front range and foothill areas have a more variable yield with floods in years with heavy rains and very limited flow in the drier years (Laycock, 1957a, Neill et al., 1970).

In general the watershed conditions of the region are only fair with devastating floods in some years (many southern streams in June 1953, and northern streams in June 1953, and northern streams in June 1972 etc.), excessive erosion in some areas (areas with more recent burns, overgrazed terraces, a number of poorly kept roads and trails), excessive sedimentation in flood periods and inadequate soil moisture and ground water storage to sustain flows in summer and fall. Most areas could be improved in flow regime pattern with some abundant and mature vegetative cover. This would result in slower and more extended snow-melting, better surface detention storage of snow and rain, better infiltration of moisture into soils and percolation through them to ground water detention storage - for slower release to streams. Artificial storage, with release at desired times and rates in known quantities, can be useful in many areas but costs, use conflicts and the relative lack of current demand are such that only the most favoured sites for multiple-use development should be considered - e.g. on the Elbow River which has a very high potential for

damaging flooding in Calgary and elsewhere downstream and which has low flow in some seasons relative to urban needs in Calgary (in addition to sedimentation, water quality, unfavourable stream environment and other problems). Vegetative cover management is necessary whether artificial storage is provided or not. A watershed in "poor condition" can have major sedimentation problems and rapid infilling of reservoirs, provision of floating materials that make reservoirs less useable for other purposes, flooding hazards that may result in dams being washed out etc.

The problem areas are present where use conflicts are present and in particular site situations. Forestry can be complementary if cutting schedules are related in part to water yield increase needs and competitive if they are not. The acceleration of cutting in the past few decades was not related to needs for extra water. Most stands in early maturity might well be left for several extra decades of growth before cutting - until water yield requirements are greater. Erosion damage is generally small except for that from some access roads, trails and some skid-trails. The recovery period between cuttings is 80 to 150 years and erosion is rarely significant for more than a few of these if at all. Regime damage can be of longer duration - a number of decades before root development to depth is re-established. Cutting practices can be important but we are fortunate in having fewer natural erosion and other hazards than most forest regions.

Commercial grazing may contribute less to a problem of erosion in any one year than forestry but it is continued every year without long rest and recovery periods. Range deterioration may be slow but in time it can be very serious and much of the more intensively used range in the Reserve and even more of that to the east of it in privately owned and leased lands of the Southern Foothills is in poor watershed condition. Reductions of numbers of cattle using the Reserve, reductions in lengths of season of use (early spring use is especially damaging) and a better distribution of that grazing permitted, have helped in recent decades. Recovery of areas badly damaged in the past is still very unsatisfactory

and severe erosion occurs widely on slopes in the Porcupine Hills, on terraces from Waterton to the Clearwater (e.g. the Livingstone, Carbondale, Willow Creek, Highwood, Elbow, Sheep Butcher, Yarrow, Pincher, Red Deer and many other valleys) and on south-facing slopes in these and many other areas. The carrying capacities of the allotments involved may not be exceeded but the livestock, if not closely controlled, ignore the forage of the increasingly dense young-growth woodlands and open woodlands distant from water and overgraze the terrace areas and more accessible grassy slopes. Better control is not a complete answer because the extra costs of control would usually exceed the value of the difference between present levels of grazing and more easily managed lower levels. Some compromises are needed because this is a significant use but as the needs for better watershed management and for more allowances for wildlife grow, declines in this relatively low value use must be anticipated. The problem of overgrazing in private and leased lands east of the Reserve must also be recognized. This foothill area has steeper slopes and more intense rains of longer duration (e.g. orographic intensification of rains from a T air) than in plains areas further east. Overgrazing in especially the drier years, when followed by heavy rains, can result in widespread and severe erosion, flashy runoff to streams, severe flooding and heavy sediment loads. This is often a greater problem than that within the Forest Reserve.

Recreational uses can result in erosion acceleration, less favourable regime patterns etc. but reasonable site selection for potential problem uses and reasonable care in road and trail development can result in negative effects being of minimal importance. Fire can be a major problem but with improved surveillance (including reporting and control aid by visitors), more fire guards (e.g. along roads), better access for early response and limitations upon use in high hazard periods and areas, it need not be great. More fires may be started than in a wilderness area but they tend to be less damaging and far less extensive than those of less accessible areas with unbroken stands.

It is often suggested that wilderness areas and areas with



wildlife management orientations are excellent for watershed improvement. This may be true in some areas if certain demand combinations are present - e.g. if the wilderness area is closely protected from fire damage and the watershed management objective is one of regime improvement involving maximum growth. In later years the watershed objective could become one of promoting yield increases and thus forest cutting would be desired. Would this be possible in an established wilderness area? If the watershed is in poor shape, growth encouragement may not be enough. Artificial storage might be needed but could it be developed? Snow management, phreatophyte control, research studies such as snowmobile snow surveys, and many other conflicts might develop. Measures such as peripheral ditching of marshes to intercept ground water flow to phreatophytes and alluvial fan bypass development to reduce losses by phreatophytes and increase live storage in fans would be in striking conflict. We don't expect to use these soon - but in the future? If wildlife management objectives included promoting browse development by cutting or burning or lax fire control (leave it to nature) etc. other conflicts could arise. The conflicts can be resolved best if there is no exclusive reservation for particular uses by particular groups - such as wilderness areas. Flexibility in management would be lost and there is a need for adaptation to changing needs.

### c) Site Capabilities

The opportunities for damage to be done to watershed properties, and for watershed improvement, vary greatly from one area to another - with use as noted and with variations in environmental patterns. (Laycock 1957, 1958, 1962 and 1966) In ice fields, glaciers and deep snow areas drifting can be induced with snow fences melting can be accelerated by dusting with carbon black (for albedo change), etc. In bare rock areas, water yields are high but runoff may be flashy. Snow concentration in drifts can be promoted so that this moisture is detained in these areas and released more slowly (parts of drifts last longer than uniform cover). Little

damage can be done in these areas to watershed and improvement opportunities are limited and moderately costly. These areas can be said to be in "good condition" in terms of water yield but there is no way for them to be bad. In terms of regime and related patterns they may be bad because runoff from rains is flashy, but it is difficult to make them "good" - except for snow-melting patterns at high elevation. The flashy flow is not a serious problem if detention storage is provided in colluvial, drift and glacio-fluvial deposits downslope. Free-fall colluvial deposits are useful also if meltwaters re-freeze within them and flow release is sustained well into the summer season - but there isn't much we can do to either damage or improve them. The deeper drift (largely unsorted till) deposits on the lower slopes of valleys and in the foothills and plains are very important because they support the better timber growth that can be managed. Alluvial and glacio-fluvial deposits have varied characteristics and many of these areas are highly subject to management. Finally, palestine or bog and marsh soils have interesting possibilities. They are much less useful for detention storage than is popularly believed because by being continually wet they have little "live" storage capacity for use in regime modification. The plants present are largely phreatophytic and subtract from groundwater flow to streams in dry summer periods. Water yield increases and regime improvement are both possible in these areas (in most areas they are in conflict) and controlled drainage can be beneficial. Such developments involve some construction cost and the environment may be "damaged" for some other uses thus we don't do much of it in these years.

#### d) Watershed Areas Demands

Consumptive use of water by phreatophytes within the watershed region is considered desirable for aesthetic, fish and wildlife habitat and other reasons. This growth, more than any other, tends to be protected from cutting and is naturally protected by wet site to some extent. Despite this protection (and partly because of it since this growth consumes riparian



and telluric groundwaters), many streams in the foothills and adjoining plains have little or no flow in late summer, fall and winter of the drier years. Better vegetative cover in the watershed could help because more of the spring flow might be detained in surface and sub-surface supplies for later release. In some cases artificial storage might also help to meet area needs as well as external needs. Flow could be released in low flow periods to supplement the limited natural supplies, flooding and scouring of channels could be reduced, sediment loads would be reduced and cooler waters could be provided from deeper reservoir supplies for improvement of sports fish habitat. Many fishing streams in the foothills and adjoining plains could be greatly improved - if this were to be an objective of watershed management. Many other aspects of environmental enhancement could be undertaken - we need not believe that the works of man are only destructive.

Watershed management is varied in objective, in regional opportunities for damage and improvement and is of growing importance in downstream areas. It is not a "left-over" category of management that can be thrown into a grab-bag of benefits from management for other uses. It is time we stopped paying little more than lip-service to it.

#### 4) Summary and Conclusions

Many additional points could be raised on the topics selected for discussion and on related subjects. Those raised may serve to indicate that we must go much farther in resource and demand assessment before we will be ready to draw up useful management plans. Multiple use development is recommended - with as little allocation to exclusive use for private, semi-private and group purposes as possible. The changing demand, attitude and assessment patterns are such that flexibility is needed and we should not zone significant areas for exclusive or specific uses - wilderness areas or whatever. Instead of this, we should establish priority patterns and assist various use development in different areas by restricting subordinate conflicting uses in these areas - but retaining multiple use

patterns as far as possible. Complementary rather than similar development is recommended for these areas relative to parks and greater recognition of the needs of users living in the plains outside of this region is suggested.

Watershed management objectives should be identified for each area. Assessment of possible damage with other uses and of opportunities for improvement is needed for each area rather than an undefined general category assessment of "watershed condition". For watershed management, as for recreation, wildlife and other uses, identification of the various and sometimes conflicting categories and assessment of the effects of these upon other uses and of other uses upon them is needed if we are to plan for multiple-use combinations.

Some of these conclusions are illustrated in an analysis of the proposal that an "Elbow-Sheep Recreation Wilderness" be established. Our recommendations are negative in favour of multi-use development.

## REFERENCES

- Laycock, A.H., 1952-55. Reports to the Eastern Rockies Forest Conservation Board: Soil Surveys - 3 Seasons; Precipitation; Streamflow, etc. Unpublished.
- Laycock, A.H., 1957a. "Precipitation and Streamflow in the Mountain and Foothill Region of the Saskatchewan River Basin." Prairie Provinces Water Board, Report No. 6, Regina, Saskatchewan. 47 pp.
- Laycock, A.H., 1957b. "A Physiographic Classification of Soils for Land Use Planning on the Eastern Slopes of the Canadian Rockies." Ph. D. Thesis, University of Minnesota, 453 pp. Unpublished.
- Laycock, A.H., 1958. Soil Surveying in Mountain Watersheds: The Problem and One Solution. Annual Meeting of the Association of American Geographers, Santa Monica, Calif. Ditto, 6 pp.
- Laycock, A.H., 1962. "Resources Management" in "Essays on Land Use", Canadian Association of Geographers, McMaster University, Hamilton, Ontario. 4 pp.
- Laycock, A.H., 1966. The Need for a Regional Approach in Water Management Planning. Proceedings of the First Annual Meeting of the American Water Resources Association, University of Chicago, Dec. 1965. A.W.R.A. Urbana, Illinois, pp. 146-154.
- Laycock, A.H., 1967. Water Deficiency and Surplus Patterns in the Prairie Provinces, Prairie Provinces Water Board Report No. 13. Regina, Saskatchewan 1967. 165 pp.
- Neill C.R., D.I. Bray, M.F. Schouten & J.R. Card, 1970. Selected Characteristics of Streamflow in Alberta. Research Council of Alberta River Engineering and Surface Hydrology Report 70-1.
- Wilm, H.G. and E.G. Dunford, 1941. Problem Analysis - Region 2. U.S. Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado. 77 pp. (mimeo).

## Appendix 1

Reactions to Proposals in Information Bulletin No. 4.

A. GENERAL More information is needed if proper decisions are to be reached. The following initial reactions are based upon assumptions that (1) multi-purpose activities will be included in land use planning within the Eastern Slopes, (2) the proposed developments will be subject to a number of restrictions concerning other management objectives and (3) approval of those within the Reserve especially will not be given until more complete assessments of the resource and demand patterns have been made and priorities have been established. Proposal No. 8 for the Bow River Basin is discussed at greater length in section H. It is considered to be the most dangerous in abuse of principle of those submitted and our vigorous opposition to it must be recorded with a discussion of our reasons for this opposition.

B. OLDMAN RIVER BASIN

- 1) Castle Mountain Resort - Reasonable but who will provide and maintain improved access facilities? What other services are expected?
- 2) White Spruce - Reasonable but in partial conflict with (1)
- 3) Youth Hostels - Strong support. One of the best types of development.
- 4) Others - Subject to normal planning restrictions, these are acceptable.

C. BOW RIVER BASIN

- 1) Assiniboia - Subject to severe restrictions, this may be acceptable. The residential aspects are potentially disturbing - they should be limited to staff requirements and should be inconspicuous. School and other public service facility development should not be anticipated. The area is probably larger than is needed for controlled use.

- 2) Bow River Basin Recreational Development - These types of use are acceptable within the Canmore Corridor, subject to planning restrictions. The choice between proposals must be based on more evidence.
- 3) Mount Rundle Village - Acceptable within the corridor although in time with zoning the residences might give way to more intensive land uses.
- 4) Bow Valley Resort - As above.
- 5) Banff Recreational Park - as above. The airport might be excluded if noise pollution could be a problem for the park and/or other development and the site is otherwise deficient. The golf course would probably soon give way to more intensive uses. These and other aspects make one doubtful about the proposal.
- 6) Bow Wildlife Park - A game farm? Marginally acceptable within the corridor - on its outer margins.
- 7) Pigeon Mountain Resort - This appears to be a very reasonable corridor use despite some snow deficiency problems. It will complement rather than duplicate Banff Park services.
- 8) Elbow-Sheep Recreational Wilderness - Definitely not! See section II of Appendix.
- 9) Youth Hostels - Excellent proposals. More might be useful later if other routes are developed.
- 10) Others - Some are competitive in function and/or space use. Most of the 21 listed are potentially reasonable but more information is needed. Policies concerning private and semi-private (e.g. youth camps with restricted patronage) facility development must be very restrictive within the Reserve and, because of space limitations, increasingly restrictive within the corridors.

#### D. NORTH SASKATCHEWAN RIVER BASIN

- 1) The Odyssey - A possibility if residential development within this corridor is limited to relatively few small areas. More realistic in scale than No. (2).
- 2) Mount Cline Leisure Resort - Similar to and competitive with No. (1). Too ambitious for the short run. Perhaps a location on Hwy 11 adjacent to Banff Park might be a better one for a major development.
- 3) Recreation Area West of Sundre - This would appear to be too private, too large and too dependent upon road improvement by government agencies. There can be no sound basis in public land planning for reservation of a large area within a multiple demand area for private or exclusive group use. Definitely not!
- 4) Youth Hostels - Again excellent. The junction site for Sawtooth is recommended.
- 5) Others - Some are reasonable, there is some duplication and most should be outlined more fully. Private and semi-private developments should be small and, with very few exceptions, limited to corridor route locations. Numbers 5, 6 and parts of 11 of those listed seem least appropriate.

#### E. ATHABASCA RIVER BASIN

- 1) Silver Summit Alpine Village - No problem.
- 2) Folding Mountain Recreation Area - Reasonable concerning an "Alpine Village" in this corridor but the small and variable snow receipt would tend to make the ski resort an unlikely proposition.
- 3) Sundance Recreational Vehicle Park - A realistic and needed facility. There should be fewer constraints in areas as distant as this from the mountains.

- 4) Youth Hostel - Very good! There should be more.
- 5) Others - Realistic service facilities - possibly some duplication but in time many more will be needed. No. 10 would seem to be very close to Cadomin because of terrain limitations.

#### F. SMOKY RIVER BASIN

- 1) Torrens River Resort - Acceptable as a public service facility given normal restrictions.
- 2) Grande Cache Ski Resort - Acceptable but snow conditions are marginal and variable.
- 3) Youth Hostel - Very good. There will be more.
- 4) Others - All appear to be acceptable subject to normal planning restrictions.

#### G. SUMMARY

Most of the proposals involving provision of service facilities for public use are reasonable. Major objections must be raised where individuals, firms or groups plan to reserve space unto themselves or for sale to others for private, semi-private or limited group use. This may be acceptable to varying degrees in areas relatively distant from the mountains where there are relatively few if any alternative use opportunities. It is acceptable with restrictions for small area units (e.g. residences) in designated corridor areas. It is unacceptable in the extreme for large area units in the mountains such as the Elbow-Sheep Recreational Wilderness Area West of Sundre (Unger). These are claims upon lands which have important alternative use potential and which must not be reserved for private, semi-private or limited group use if public interests in general are to be served. A more detailed assessment of one of the areas involved follows in Section H.



It is likely that local opposition to some of the proposals will be registered. In allocation of permits it is desirable that local groups be favoured but a more important consideration is the long-range quality of service to the public that is rendered. Judgments of this nature are difficult. Impact statements with outlines of both the negative effects of development (acceleration of erosion, subordination of other use etc.) and the positive effects (the service proposed, the additional use of the environment, complementary development prospects) can be useful in decision making. They should be broader than the conventional environmental impact statements because the satisfaction of demands for resource use is an important factor in decision making. With such statements a number of proposals may be approved if they appear to be in accord with regional needs, in many cases before "final" regional plans have been completed. Planning is a continuing process - plans will change with changing needs and changing assessments of environmental factors. and reasonable proposals should not be stopped indefinitely.

#### H. THE ELBOW-SHEEP RECREATIONAL WILDERNESS - A MORE DETAILED ASSESSMENT

- 1) General - The proposal of the Alberta Wilderness Association that 560 square miles (358,400 acres) of the Elbow, Sheep, Highwood, Kananaskis and Jumpingpound River basins be reserved as a wilderness area is a disturbing one. A single interest group wishes to reserve this large area of public land, that now has a number of uses and holds promise of having a major expansion in a number of these uses, for its own purposes. Some other uses and benefits are claimed, some incorrectly, but a relatively small portion of the potential of the region would be realized and that by a relatively small part of our population.

This incomplete review of environmental and demand patterns in the proposed wilderness area may be useful in illustrating that more intensive use of these resources is possible and desirable by and for

society as a whole. Let us review some of the environmental support capacities for different uses and some of the effects of different demands upon the environment, and, in this review, note how well or poorly the proposed use would meet supply and demand potentials.

2) The Physical Environment

- a) This is one of the more elevated areas of the Eastern Slopes with relatively high relief, steep slopes, widespread bare rock and high exposure to physical weathering and erosion. It is an area of striking beauty but it is deficient in biological resources because of the factors noted. The outstanding beauty of the highly glaciated alpine terrain can be appreciated primarily by man who derives his living in less rugged environments at lower elevation. For most of the sparse animal life there is a struggle for survival and the bare rock and long lasting snow areas are to be avoided because they provide little sustenance. The creation of a wilderness area would greatly inhibit utilization of the scenic resources by man and it would not significantly improve utilization by wildlife.
- b) The climate is severe but there are many days in summer and fall when the cool, bright air is an exhilarating change from the heat and increasingly smog-laden air of the neighboring plains and of warmer regions. Day trips into the area from Calgary (only 25 to 75 miles away) can be arranged on short notice. Trips of longer duration may also be pleasant but the variability in weather is great and most people would prefer to be able to adjust to it rather than pretend to enjoy self-imposed, primitive survival exercises. Winter and spring also have many pleasant but colder days and the changing

scenic patterns of the different seasons are a growing attraction with improving access. The better snow conditions for skiing are in the higher back range areas near Elbow Pass and the nearby divides between the Elbow, Sheep and Little Elbow valleys. Excellent snow conditions may be present in foothill and front range areas in late winter and spring of many years. However, such snow is less dependable and is usually of lesser depth than that of the back ranges. Proximity to Calgary, where snow is usually light and undependable, can result in both back range and front range snow areas being heavily utilized. The creation of a wilderness area would result in very little use of the climatic resources present.

- c) The vegetative cover, by world standards, is very low in productivity, very marginal in quality for use, and the fires of this century, particularly those of 1936, have devastated what had slowly developed in preceding years. With continued re-growth the summer range carrying capacity of the area for ungulates will continue to decline, perhaps to half of present levels. The more mature forest cover has much less browse than an area of young growth. Continued fire protection will result in encroachment of forests upon the grass and shrub-lands which have been extended in the past by fire and grazing activities. Such protection is badly needed for watershed improvement. Recreational users will in general prefer the more mature cover. The forestry potential is small and more of the decisions concerning if and when cutting should take place should be based upon watershed and aesthetic considerations. This should also be true for commercial grazing. The creation of a wilderness area with deteriorating fire road access could result in a more natural environment, including extensive fires, but is this what is really needed?

- d) The wildlife populations are small and are limited very largely by environmental deficiencies. Summer forage supply is not large but a more severe limitation for ungulates is the severity of the winter, particularly if snow is heavy and crusted and spring is very late. In such years the winter range is largely outside the proposed wilderness area and losses are high. The creation of a wilderness area would do little to reduce these losses and the philosophy that man should not interfere could result in greater losses and privation than if assistance were to be given in the harder winters.
  - e) Watershed characteristics must be separated if assertions are to be meaningful. Water yields are high because precipitation is high (a winter maximum in back range areas and summer in front range areas) and evapotranspiration is low (because of low temperatures and the flashy runoff from bare rock areas). The front range and foothill yields are smaller and much more variable than those of back range snowmelt with severe erosion, sedimentation and flooding in some years. The flow regimen is characterized by high spring and early summer runoff and low flow in late summer, fall and winter. Detention storage is good in colluvium, the deeper drift and many of the glacio-fluvial deposits but flashy runoff from bare rock areas and from burned-over woodlands and closely grazed range is widespread, erosive and flood-producing. Water qualities are often poor because of erosion and flooding and in general this watershed region is in relatively poor condition. Many positive measures of watershed improvement may be taken but most would be avoided or inhibited if a wilderness area were to be created.
- 3) Management Objectives - Alternatives and Combinations
- a) Watershed management is badly needed for regime improvement

and for the related effects of erosion, sedimentation and flooding limitation and quality improvement. Yield increases would be welcome but not as flood flow and it is unrealistic to expect increases in other ways given the environmental patterns present. The transpiration requirements of the maturing growth will increase and there is little potential for reduction in demand through forest cutting because of a lack of mature growth. Minor yield increases could be obtained through phreatophyte control - but at the expense of fish and wildlife and aesthetic appearance. Snow drifting control and other means could result in minor yield improvement but at present our needs downstream are met adequately by annual yield - the problems are related to regime inadequacies (e.g. flooding in spring and deficiencies in other seasons).

There is a major and growing downstream demand for the waters of the Elbow, Sheep, Highwood, Kananaskis and Jumpingpound Rivers, which originate in this region. The location of Calgary on the Elbow River and its use of the Elbow as its major water supply add to the importance of this system. In addition, the widespread construction on the Elbow floodplain within Calgary (whether wise or not) has resulted in a major need for flood limitation. The city has been fortunate in the past four decades that major flooding has not occurred and by normal odds a major flood is overdue - one that would result in many millions of dollars in damage. There is a strong case for multiple-purpose artificial storage upstream - and the best sites are within the proposed wilderness area. Whether a dam is constructed or not, there is a need to manage the vegetative cover to obtain maximum growth in the basin. This will result in improved surface, soil and groundwater detention storage and reduced erosion. It can be obtained in part by very close fire control and this will involve mechanized transport and good access.

Intensive recreational use could result in more fires but with

good access, fire breaks (e.g. on roads) early reporting, and quick response to outbreaks, they can be prevented from becoming extensive. Much more extensive fires tend to be present in natural areas. Moreover, certain uses can be curtailed in high hazard periods. Road and trail erosion will tend to be greater with recreational use but this too can be kept within acceptable limits. It is not correct to assume that the natural conditions are best for watershed - we can do much to improve them. Similarly it is not correct to assume that acts of man must be so damaging that man must be excluded except in a primitive state. Some damage may be done but we can do much to keep it within reasonable bounds and more than compensate for it by other positive action. This is largely a matter of our defining our objectives and acting to obtain them.

- b) Wildlife management objectives are varied and changing. If we wish to obtain maximum productivity of ungulates we might do more by helping them through severe winters than by establishing wilderness areas. The presence of visitors in summer and winter need not result in reduction of numbers of most species - very few visitors get very far from roads. Having significant numbers present for viewing by visitors can be an objective of management. Some species will leave if too many visitors are present. The question of what "too many" is, is a problem of definition relating to time of presence, what the visitors do, etc. but far larger numbers of visitors can be accommodated in most areas with little effect. Hunting pressures vary, but with game management a reasonable and well distributed harvest is possible if access is good. If access is poor and horse entry as well as vehicle entry into the wilderness area is excluded, the central parts of the area will remain virtually unhunted because of the problems of game removal. In an area as close as this, and as similar as this is, to Banff Park, normal planning procedure would be



one of complementing Park management, not imitating it. The provision of duplicate services can be justified only if there is an overwhelming demand for this service and there is very little demand for any other. This is not the case for wildlife management and is even less true for other uses.

- c) Recreational use of this area might be expected to be more intensive than that of almost any other mountain area of the Canadian Rockies. Exceptions might be found along major trans-mountain transportation routes but the proximity of this area to Calgary, by far the largest centre within day-trip range (to and from with time for recreation activities) of the mountains would lead one to anticipate intensive use. In terms of travel efficiency and convenience and the diversity of attractive mountain terrain, this area is ripe for development. For various reasons it still has a low level of recreation use but with limitations upon recreational use of Banff Park, rapid changes are anticipated. Any attempt to reserve the area for low intensity use by a small minority would be a denial of the best goals of conservation management - "the greatest good for the greatest number, now and in the future." Moreover, if such proposed uses are similar to those planned for Banff Park rather than different and complementary so that a wider range of needs might be satisfied, acceptance of the proposal would be a negation of reasonable planning procedure.

How might the greatest number of people enjoy this mountain environment most effectively? Largely by zoned and managed development. Thus parts of Moose and Forget-me-Not Mountains might be zoned for snowmobile and motorcycle oriented activities plus any others that are compatible. The needs of these groups might be met and a better rationale



for limiting their activities elsewhere would be established. Except for potential conflicts with other uses, such as watershed, the claims of these groups for space are just as valid as those of equal numbers of trail hikers, hunters or picnickers. It is quite possible to locate any of these and other activities where environmental damage and competition with other users will be minimal and acceptable.

One of the greatest needs in day-use activities is to have wide-spread recreation road and trail development which will permit widespread sightseeing and dispersal of numbers. For example, the higher parts of the Little Elbow Summit, Elbow Pass and Sheep Pass area are among the most interesting and attractive in the Rocky Mountains. Similar landform vegetation combinations at well over 7000 feet elevation are relatively unavailable to visitors by road elsewhere. Present forestry roads into and through the area can be upgraded with comparative ease in these glaciated, U-shaped valleys and passes. They can be extended easily through Elbow Pass to the Coleman-Kananaskis Trunk Road and on past Lower Kananaskis Lake and Spray Lake into Banff. Circle-route day trips involving use of the moderately interesting Calgary-Banff Highway and this more exciting route could be very popular. Connections to Canmore, down the Sheep Valley to Turner Valley and via Evans-Thomas Creek to the Lower Kananaskis Valley are now largely present as forestry roads. These and other routes would provide visitor access to a wide range of terrain, vegetation, climatic and other environmental patterns.

- d) Other uses might be evaluated (as in the main text) but it is probable that the resource and demand patterns are such that planning should be oriented largely to recreational and watershed needs. Both, in their many facets, can be accommodated very well if the multiple objectives in each are carefully identified and the environmental patterns are carefully evaluated for potential damage and for improvement with each use. Other uses can also be accommodated to varying degrees and possibly at different times in different parts of the region.

- 4) Conclusion. Additional studies of the resource and demand patterns are needed before decisions should be reached committing this area to any long-range limited use pattern. However, it would appear that the proposal of the Alberta Wilderness Association is extremely inappropriate for the region if the best planning practices and conservation goals are to be employed. A good case can be made for a number of wilderness areas in Alberta - but not here.
- 5) Alternatives. It is recognized that there is a growing demand for wilderness area development and that alternative sites should be studied. In-depth research is needed but very preliminary reviews of environmental and demand patterns are promising for the Dutch Creek-Tornado Mountain area in the Livingston District, possibly extending northward to include the Upper Cataract Creek Basin in the Highwood District. This area is midway between Banff and Waterton Parks with a wide range of terrain and biotic resources. The northern part of the outstanding Dutch Creek-Racehorse Creek forest might be included so that some mature and over-mature cover could balance the burned-over and young growth areas in hiker attraction. The mountains on and near the divide, such as Tornado Mountain and Gould Dome are high and rugged yet several of the valleys are relatively low and dry and a wide range of habitat is present for wildlife. Wilderness land use would be much more complementary to watershed management than in the Elbow Basin. The area is approximately 40 miles more distant from Calgary and would experience much less recreation pressure yet it is close enough that those planning more than day-trips would suffer little inconvenience. This area is well removed from, rather than virtually adjacent to, a similar use park area, and complementary resource development rather than duplicate development might be stressed so that a wider range of user-demands might be met. The questionable

practice of reserving a large area for use by a specific group might still be considered, however, and it might be found that multiple-use planning would meet most of the needs expressed without separation.

DEPARTMENT OF GEOGRAPHY  
TELEPHONE (403) 432-3274



THE UNIVERSITY OF ALBERTA  
EDMONTON, CANADA T6G 2H4

July 20, 1973

Dr. W. R. Trost, Chairman  
Environment Conservation Authority  
9912 - 107 St.  
Edmonton, Alberta

Dear Dr. Trost:

Let me commend you again for the excellent hearings you have organized and directed. They will be most helpful in the slow and painful process of decision making concerning the future management of the Eastern Slopes! I should like to add comments on four items that might usefully supplement previous comments.

1) On Saturday, July 7, 1973, I didn't wish to offend Mr. Smith who is a most sincere elderly gentleman, but I cannot accept his Club of Rome - Limits to Growth (Meadows etc.) approach and its application to the Eastern Slopes. My views concerning the "Limits to Growth" are approximately those of Fred Singer who headed an American Geophysical Union committee reviewing the Meadows publication and reported in EOS in July 1972, and at the AGU annual meeting in 1972. He illustrated how the terms of reference for the projections are so binding (eg. for chromite the assumptions are that no lower grade ores would be used, the major discoveries have all been made and there should be no substitution - yet demand would grow exponentially etc.) that it is easy to define limits to growth that will be reached very soon with continuing rates of demand increase. Broader and more realistic terms of reference would probably result in somewhat more extended limits, especially in renewable resource areas. Various writers have expressed views ranging from the wildly optimistic to the extremely pessimistic - it isn't all one way. F. Knelman (Sir George Williams) is bringing out a book this summer to be titled "The Growth to Limits" that should be good - in which he will stress the need for us to recognize the various limits and constraints and our need to more carefully plan use toward these limits. In the Eastern Slopes, such an application would involve the most efficient multiple - use program rather than one of reserving

large areas for less efficient single uses. We should not proclaim that limits exist and then impose much closer limits upon resource use thus depriving ourselves of much of our capacity to meet our diverse and growing needs.

2) In replying to a question by Julian Kinisky concerning the reliability of comparative assessment techniques, I was probably more pessimistic than I should have been. D.H. O'Donnell was quite correct in his claim that measurement techniques are more sophisticated and useful than had been indicated (I had expressed a preference for R.F.F. materials and still consider them to be among the most useful). Yet Terry Veeman is quite correct when he suggests that they are still crude. It is partly a matter of how they are used. If (as I suggested on page 6) different assessment procedures are used and certain areas still remained predominantly in specific categories, much stronger cases might be made for management foci upon thus defined prime uses. Benefit/cost, input / output and other procedures are very subject to abuse, especially if review and challenge procedures are weak, but they certainly are much better than the present procedure of assuming equality for top categories of all of the uses selected.

3) In my oral presentation I placed more stress on the undesirability of reserving large blocks of public land for specific uses of all kinds, - with less stress on wilderness areas than in the written report. The current new drive for virtually exclusive use of large areas is in this sector and it should be resisted. Unfortunately, any management organization will be severely limited in what it can do by past commitments of large areas to single uses. There are ways of getting around a number of these by controlling the timing of cutting, mining etc., but it will be necessary to modify a number of practises if multiple use management is to be more than taken. The Eastern Rockies Forest Conservation Board hasn't done a very good job. We still need a proper problem analysis before planning to defined objectives can be started.


4) Interim planning measures are needed until management plans are better developed. We have discussed a number of aspects but one thought that may be of interest relates to the impact statements that are needed. These should be submitted for all developments, but submission alone is not enough. There are needs for:

- a) a critical review, including public hearings for groups of submissions, by a review body that includes but is not completely dominated by members of the administering authority.
- b) a wider content than environmental impact including social and economic costs and benefits and effects upon other uses and users.
- c) impact statement replies should be provided by the agencies

requiring project modification and rejecting proposals - partly to explain why rejection or modification was necessary and partly to provide guidelines to those who might wish to submit new proposals.

The requirement for such replies would also tend to reduce arbitrary and single purpose oriented decision making - eg. long term delay of apparently reasonable project development. Similarly, internal decisions by agencies should be based upon impact statements justifying departmental actions. Too many land allocations, road building, dam and other decisions are not subject to proper statement analyses and review and they should be before single-purpose and other developments are undertaken. Periodic hearings are just as useful for public agency proposals as for private proposals.

Yours sincerely

A handwritten signature in cursive script, reading "Arleigh H. Laycock".

Arleigh H. Laycock  
Professor of Geography

## QUESTIONING BY THE AUTHORITY

MR. DOWLING:

I understand that the Poothills Resource Allocation Study group is working on a volume of information with respect to assessment procedures. From your knowledge of that specific information, is it being handled in the proper fashion or are there any alternatives? Is there sufficient information at present to follow the procedures you have set out?

DR. LAYCOCK:

I'm afraid that shortcuts may be taken. Using the material provided so far, I think we are likely to jump to conclusions that prime uses are important and we might forget about other uses in these areas.

I think we have to manage for multiple-use purposes rather than for individual-use purposes in a great number of areas. This involves further surveys and further assessment of the potential damage by other uses to individual uses and perhaps even more important, surveys of the potential for improvement. For example, if a watershed is in poor condition, what is its potential for improvement? In the present schedules we haven't planned for that type of thing.

MR. DOWLING:

But do we have sufficient information to start looking at it in that particular fashion? Is no additional field data required?

DR. LAYCOCK:

Yes and no. It would be highly desirable, of course. But I believe we could do a very large amount with what we have.

MR. DOWLING:

How are we going to measure values of land for recreational purposes in the future? This is one problem that continues to arise.

DR. LAYCOCK:

It's one of the greater problems, I agree. A number of attempts to evaluate recreation have been made. Personally, I like the number of publications on resources for the future. There are numerous publications available.

I think we have to break recreation down. It isn't a single category. It is a great number of categories. When we do break it down and try to assess the individual recreational uses for different areas, it becomes far clearer than if we try to group everything. This is one of the most important first steps. I suggest in this paper about 15 different categories that might be used.



MR. DOWLING:

Water management is your field of expertise, just how advanced are the techniques of water management practices? How predictable or reliable are the management methods?

DR. LAYCOCK:

This is probably a definition of objective. If you are speaking very generally of watershed condition and assume it's good or bad according to the yield from the area, I think it's meaningless. Surely anything we do in that direction is almost useless. It has no authority.

If we start defining the different subdivisions of watershed management for yield improvement, for regime improvement and so on, I think we can go a long way. We can assess each area quite reasonably without much difficulty.

MR. DOWLING:

Supposing we have a proposition to harvest several thousand acres of mature timber from the watershed and you have to make the decision whether this harvesting should be done, what degree of reliability can we expect? Should we go ahead with that program of harvesting? Do we really know what's going to happen or will we be guessing somewhat?

DR. LAYCOCK:

In the past and even now we are focussing on harvesting according to the revenue we might derive from it. We're more interested in producing a forest product than in the watersheds.

We can know pretty closely through water balance studies just what the effect of harvesting might be on watershed and water yield. As I indicated in the paper, the potential for water yield improvement is not very great in the eastern slopes, partially because we don't have very much mature timber in the eastern slopes. There isn't very much to harvest. As forest cover matures beyond present levels, it will have a greater consumptive use than it has now. In 20 or 30 years we might very well have 5 per cent smaller water yields than we are getting right now from the eastern slopes.

On the other hand, if we were to burn everything out, we might increase the yields by 20 or 30 per cent for the area as a whole and by several hundred per cent in specific parts of the area.

Obviously if we're after water yield and that's all we're interested in, sure, we can get it. But this isn't what we're interested in. We're interested more in regime improvement, in having a good seasonal distribution of yield and so on.

MR. KINISKY:

I'm interested in your terminology for the various uses in the foothills, prime uses all the way down to noxious uses. Unfortunately it seems that in our society we have to quantify everything in terms of dollars so if you use these numbers you have a numerical comparison which people will more readily accept. We can't seem to find a method or a suggested method by which to quantify, in a general sense, social or recreational values. Have you done any thinking on how to approach this particular problem?

DR. LAYCOCK:

Quite a bit. We haven't yet come up with a very good answer but I shouldn't deprecate what has been done. I believe we can come up with far better values than we have. I'm not very happy with the Canada Land Inventory material where they tend to equate uses. But at least they don't try to equate the top values for each area. They tend to recognize that there are top values, for example, that the coast forests in British Columbia have high value and that others grade down from it. We're not doing that for the eastern slopes. We tend to have top values for each category within each particular area, which is irrational.

I'd like to develop that much more fully. I'm interested in the comparison with Colorado. I think Harold Wilm has done some very interesting work in this regard. He suggests a scale of \$2 per acre for grazing, \$20 for forestry, \$200 for watershed and \$2,000 per acre per year for recreation.

MR. KINISKY:

Is this a general application or will there be varying values for recreational purposes?

DR. LAYCOCK:

It will vary tremendously.

MR. KINISKY:

That makes it even worse. How far can we go toward increasing watershed yields before we begin to cause such problems as undesirable quality, degradations or erosion? What percentage values in improvement are we talking about?

DR. LAYCOCK:

With the watershed in its present condition, I doubt very much whether we should try to increase yields in any more than 5 per cent of the area, or something of that order. Meanwhile, the rest of the area is undergoing maturing of timber and so on and it will be subtracting from yield. I don't think we can gain. We're going to lose in the next 30 years or so when we have more mature cover. An important point is that we don't really need the extra yield right now. We can afford to wait 30 years or so for yield improvement. There are alternatives. Some of these are discussed in the paper.

MR. KINISKY:

In the Oldman River drainage basin there have been times when we have been consuming as much as 40 per cent of the flow because of all the drains upon this basin. Presuming there will be additional calls upon water, what sorts of things can happen in that basin, what can we do to maintain current supplies and improve supplies in the future?

DR. LAYCOCK:

If you want to make a rough estimate, in the long run it's doubtful that the yield of the Oldman River can be increased by more than about 5 per cent through watershed management. We won't get extra yield, but we will have a much better distribution with watershed management. We will reduce flooding, erosion, sedimentation, channel scour damage, this sort of thing and improve water quality. We can do a lot of these things; there is a good

potential in these directions. But yield increase - no. We'd better look elsewhere for water.

STORAGE OF WATER  
IN THE  
NORTH SASKATCHEWAN RIVER BASIN

A Brief Submitted by Calgary Power Ltd.

Presented By: T.D. Stanley

to  
The Public Hearing  
on  
Land Use and Resource Development in the Eastern Slopes  
Alberta Environment Conservation Authority  
Edmonton July 5-7, 1973

## STORAGE OF WATER IN THE NORTH SASKATCHEWAN RIVER BASIN

## Contents

INTRODUCTION .....	958-3
LAND USE FOR STORAGE AND POWER IN THE NORTH SASKATCHEWAN RIVER BASIN.	958-4
RIVER FLOW AUGMENTATION DURING LOW WATER SEASON .....	958-6
ROLE OF BIG BEND AND BIGHORN IN THE PROVINCIAL POWER SUPPLY SYSTEM ..	958-10
OTHER USES OF THE RESERVOIRS .....	958-11
Irrigation .....	958-11
Flood Control .....	958-13
Recreation .....	958-14
PROSPECTS FOR ADDITIONAL FUTURE LAND USE AND RESOURCE DEVELOPMENT ...	958-15
SUMMATION .....	958-18

## Plates and Tables

PLATE 1	NORTH SASKATCHEWAN RIVER STORAGE AND POWER DEVELOPMENTS	
TABLE 1	OPERATING CHARACTERISTICS OF NORTH SASKATCHEWAN BASIN RESERVOIRS .....	958-12

## STORAGE OF WATER IN THE NORTH SASKATCHEWAN RIVER BASIN

## INTRODUCTION.

Water is one of the primary resources of the Eastern Slopes of the Rocky Mountains, streamflow from this region being of great importance to the Prairie Provinces. This is so because the Eastern Slopes have a relatively reliable and abundant water supply in summer, while the plains to the east are inherently subject to periods of drought and excess. Runoff from the Eastern Slopes is relatively constant from year to year, but it is extremely variable from season to season - summer flows being ten to fifty times as great as those of winter when all precipitation falls as snow. The potential for storing water from the summer snow melt for later use is an important resource, and one for which land may be used to great advantage. Great responsibility rests on us all to ensure that this resource remains renewable, and that it is well-managed.

It is the intention of this brief to describe the development of storage and power in the North Saskatchewan River Basin by joint action of the Province of Alberta and Calgary Power Ltd., to discuss the water management practices being developed to augment winter streamflow on the lower river, and to discuss possible future requirements of water storage and management. The potential for subsidiary benefits to irrigation, flood control and recreation will also be explored.

## LAND USE FOR STORAGE AND POWER IN THE NORTH SASKATCHEWAN RIVER BASIN.

The North Saskatchewan River, as illustrated on Plate 1, has a drainage area of about 8,100 square miles upstream of Drayton Valley, near the easterly limit of the Study Area. Of this drainage area, 1,297 square miles lie within Banff and Jasper National Parks, drained by the main River and its tributaries, the Brazeau, Clearwater and Siffleur. Thus, the North Saskatchewan drains 6,800 square miles within the Study Area. This represents 63% of the gross drainage area at Edmonton.

At the present time there are two storage reservoirs in the North Saskatchewan River Basin within the Study Area. As illustrated on Plate 1, these are:

- Brazeau Reservoir, created by construction of the Brazeau Dam to augment the flow of the North Saskatchewan downstream from the Brazeau's mouth during the low water season, using the Big Bend hydroelectric plant to control the discharge,
- Lake Abraham, the reservoir created by construction of the Bighorn Dam to augment downstream river flow during the low water season, using the Bighorn hydroelectric plant to control the discharge.

The Brazeau Reservoir has a tributary drainage area of 2,140 square miles, while that of Lake Abraham is 1,490 square miles. The two reservoirs thus regulate the runoff from 3,630 square miles, about 45% of the total drainage area of the North Saskatchewan River above the easterly limit of the Study Area.



The Brazeau Dam and Reservoir were built by the Province of Alberta and ownership of these works and the land which they occupy is by the Crown. They are leased to Calgary Power Ltd. but the Company must buy them by 1980 at the latest. The reservoir outlet works, spillway, power canal, intake works, and powerhouse comprising the Big Bend Power Development were built by Calgary Power Ltd. on lands leased from the Crown under terms of the agreement for joint construction and the Water Power License.

The Bighorn Storage and Power Development was built by Calgary Power Ltd. on lands leased from the Crown under terms of the Water Power License.

Both of the reservoirs are managed by Calgary Power Ltd. which operates the hydroelectric plants as an integral part of the electric system from which it supplies approximately 60% of the Province's electric power requirements.

The total area occupied by the projects is 31,000 acres, about 48.5 square miles or 0.7% of the drainage basin within the Study Area. Over 95% of this area, 29,600 acres including the original river channels, is occupied by the two reservoirs and the Big Bend power canal. In addition, there are some 362 miles of transmission lines within the Study Area. The total area of the rights-of-way along which these lines were built is 2,800 acres. Access to power plants, water intakes, pumphouses and substations is limited for reasons of public safety, but the use of the land does not preclude other uses which are complementary to the prime purposes of the developments - streamflow augmentation during the low water season and the production of reliable electric power. Construction of the Brazeau Project resulted in much improved accessibility of that region.

## RIVER FLOW AUGMENTATION DURING LOW WATER SEASON.

During the early 1950's growing concern developed about deterioration of water quality in the North Saskatchewan River downstream from Edmonton in the winter. At the request of the Government, Calgary Power Ltd. investigated the storage sites at Bighorn on the North Saskatchewan in 1953-56 and at the Big Bend of the Brazeau in 1956-59. The governmental concern about water quality led to a decision for joint construction by the Province and Calgary Power Ltd. of the Brazeau Storage Project and the Big Bend Power Development. Construction of the reservoir alone would have required costly permanent outlet structures in order to discharge controlled flows downstream. This was obviated by construction of the power development. The sharing of costs for the project was based on the premise that Calgary Power customers should pay no more for power from this site than from alternate sources available to the Company at the time of construction. The Government built the Brazeau Dam with provision for controlled releases through the diversion conduit from November 1961 until March 1965, when the power development's first turbine was completed by Calgary Power Ltd. In 1969, Calgary Power Ltd. built a chute spillway and raised the dam by six feet to increase the useful storage volume to 395,000 acre-feet. The Brazeau Reservoir has a relatively small volume in relation to summer inflow, and can be fully drawn down each winter for refilling during the following summer.

Continued interest in augmenting the flow of the North Saskatchewan River during the low water season led to a further decision by the Government to make a contribution towards the construction of the Bighorn Storage and Power Development. Once again the basis for sharing costs was the cost of power from

alternate sources available to the Company at the time. The project was completed in late 1972 and one-quarter of its gross storage volume of 1.16 million acre-feet was stored during the fall for release during that winter. Despite its large storage volume Lake Abraham's capacity is also less than the summer inflow from the highly productive mountain basin in and bordering Banff Park. For several reasons it is desirable that a part of each day's inflow be discharged downstream. The rate of filling is therefore low until mid-June, high in July and then decreases until mid-September when outflow approaches inflow. After mid-August runoff from the high mountain snowfields becomes a less significant part of the total inflow, and late summer inflow to the reservoir is accordingly quite variable from year to year. Hence, the Lake is only likely to be completely filled in a year of much above average rainfall in August and September.

The total storage available in the two reservoirs at the start of the drawdown season will range from 0.9 to 1.5 million acre-feet. If used at an even rate throughout the eight-month period beginning in mid-September, this would augment the combined natural flows below the two dams by 1,900 to 3,100 cfs. The dams are 150 and 270 miles respectively, upstream of Edmonton where the long-term average natural flows of the North Saskatchewan River at Edmonton, December-March, is 1200 cfs. Unfortunately, conditions on the River make it impossible to release the stored water in a manner which would result in a corresponding augmentation of the flow at Edmonton throughout every day of the low water season.

During periods of freezing weather from early November to late March, ice forms in open reaches of the North Saskatchewan River. At the onset of winter, the river is open from edge to edge. By growth of side ice, the river

narrows in early winter and lodgement of flowing slush ice occurs within a few days near Waskatenau. If river flow is relatively low, ice bridges form at other points where stream velocity is naturally low, or has been reduced by ice bridging or by anchor ice formation on the bed. In this period, river flow is being greatly diminished due to ice formation in the 350 mile reach downstream of Bighorn to Waskatenau. The river width in open sections continues to be narrowed by edge ice. As winter progresses ice cover builds upstream reaching Genesee in 3 to 4 weeks and Drayton Valley in mid-December.

If flow from Bighorn is not much greater than natural flow, the ice cover on the Saskatchewan upstream of Brazeau confluence builds quickly in the moderate-gradient, braided river channel extending to Rocky Mountain House. Under these conditions this occurs concurrently with formation of the ice cover on the lower river. If, however, an attempt should be made to pass much above average river flow from Bighorn during the first three to four weeks of winter open water would persist in this reach with continued loss of water to formation of ice and danger of ice packing which could inundate low lying flood plain along the River.

Once ice cover is well-established on the river from Brazeau confluence upstream to Ferrier siding above Rocky Mountain House-Bighorn outflows can be doubled. The reason for this is the increase in river bank height upstream from Ferrier.

To a degree this phenomenon also affects Brazeau releases during the first three to four weeks of winter. Accordingly, Calgary Power expects that there will always be a period in early winter when ice losses will prevent any

appreciable improvement in river flow at Edmonton above the minimum daily averages of 1,200 to 1,900 cfs which have occurred sporadically in early winter since 1962 with operation of Brazeau Reservoir.

The draw down period of the reservoirs generally extends from mid-September to mid-May. Early drawdown in September and October will be concentrated at Lake Abraham. In November-December, when storage releases from Lake Abraham must be curtailed in order to facilitate the formation of an ice cover on the North Saskatchewan from the Brazeau confluence upstream to Ferrier, the withdrawal from the Brazeau Reservoir will be increased gradually to its winter rate. As described above, once ice cover is well established on this reach of the North Saskatchewan, generally about mid-December, flows from Lake Abraham can also be increased, and are then maintained at about the same rate through March. Thus, somewhat greater than average winter flows are available from late December through March, the critical period when complete ice cover existing on the River at and downstream from Edmonton prevents the renewal of dissolved oxygen content. Storage withdrawal from Brazeau Reservoir decreases in March and ends completely in mid-April when snow melt runoff from the low forested plains east of the Rockies begins. Lake Abraham's inflow is from high mountain country so that the snow melt begins one month later, and storage drawdown continues there through April and early May. During April, the water which was lost in the formation of ice cover on the River during the winter is regained by melting, but has little value since the River is then able to renew its dissolved oxygen by contact with the air.

Settlements and industry drawing their water supplies from the North Saskatchewan River extend from Rocky Mountain House to downstream of North Battleford. Return process water and treated sewage are mostly introduced in

that section extending from central Edmonton to Fort Saskatchewan. Several large non-consumptive users including Edmonton's water supply, two refineries, two thermal power plants and several petrochemical plants have benefitted by the increase in winter flow that has occurred since 1961.

#### ROLE OF BIG BEND AND BIGHORN IN THE PROVINCIAL POWER SUPPLY SYSTEM.

In its brief to this Authority during the earlier hearing dealing with the Bow River Basin, the Company reviewed the history of development of the power supply system and explained how this had led to the practice of retaining about one third of the storage in the Bow River reservoirs as a reserve for use in the event of a particularly poor runoff year or unforeseen difficulties with one of the thermal generating units. The four Bow River reservoirs have small drainage areas and the inflow to them in years of poor runoff is less than their gross storage volumes. This is not the case with the Brazeau Reservoir and Lake Abraham, both of which receive summer inflows which are always in excess of their gross storage volumes. Reserve storage, as practised on the Bow Basin Reservoirs is therefore not practicable at Brazeau and Lake Abraham. However, advantage can be taken of the difference in the date of beginning of runoff in spring; mid-April at Brazeau, mid-May at Bighorn. An amount of 200,000 acre feet, approximately one-fifth of gross complement, is expected to be retained in Lake Abraham for use in the 6 to 7 weeks after April 1. After the plains snow melt is over at Rocky Mountain House, the River remains in low stage until mountain snow melt begins on the Clearwater and Ram in late May. This reserve at Bighorn has the effect of supplying carryover storage, although it must be used up by the end of May each year when reservoir inflow approaches power plant discharge capability. This portion of Bighorn storage represents 35 million KWH and so represents a small reserve against electric system trouble.

The Big Bend plant was designed as a peaking installation, has an output capacity of 355 MW at 390 feet head and is the largest hydro plant on the interconnected system. The Bighorn plant was designed as a "middle of the load curve" installation, operating 14 to 16 hours a day and shutting down at night. It has an output capacity of 68 to 120 MW depending on head, which can vary from 180 feet in May to 290 feet in September. The two plants each produce about 400 million KWH per year, or about the amount used by all of the Company's rural customers in 1972.

The operating characteristics of the reservoirs and power plants are summarized in Table 1.

#### OTHER USES OF THE RESERVOIRS.

The foregoing paragraphs have discussed the way in which Brazeau Reservoir and Lake Abraham are operated to fulfill their primary functions of low flow augmentation and the production of reliable hydroelectric power. In so doing they also provide other benefits. The following paragraphs discuss these two reservoirs in relation to some of the other benefits commonly attributed to multi-purpose water resource developments.

#### Irrigation

The central parkland region has a somewhat higher average annual rainfall than the southern prairie region, and irrigation has never been seriously considered along the North Saskatchewan River. However, the possibility of diverting water from the Clearwater or North Saskatchewan near Rocky Mountain House to augment the flows of the Red Deer River for irrigation in east-central Alberta has been considered at various times. Storage in Lake Abraham would



TABLE 1

## OPERATING CHARACTERISTICS OF NORTH SASKATCHEWAN BASIN RESERVOIRS

Reservoir	Gross Storage Volume acre-feet	Average Annual Flowby acre-feet	Intermittent Plant Operation	Storage Withdrawn	Lowest Reservoir Level	Refilling Begins	Within 15 ft. of maximum level in period
Brazeau	395,000	1,200,000	nearly every day	Oct.-mid April	about April 10	mid-April	July to November
Lake Abraham	1,156,000	1,900,000	daily, 15 hours	October-mid May	mid-May	mid-May	mid-August to (1) mid-September

958-12

- (1) In years of below median August runoff, Lake Abraham may be down more than 15 feet from full supply level in early September; in years of much above median runoff in August, Bighorn will be within 15 feet of full supply level mid-August through September.

extend the potential diversion period. Diversion during the winter would, of course, be in conflict with Lake Abraham's primary purpose.

#### Flood Control

As described in the section dealing with their role in streamflow augmentation both the Brazeau Reservoir and Lake Abraham will be drawn down during the winter and refilled during the summer. A measure of flood control is inherent in such operation.

Outflow from Lake Abraham will be limited to the turbine discharge capacity of 5,800 cfs. However, major floods at Rocky Mountain House and further downstream arise from runoff in the Clearwater, Ram, Baptiste and other smaller tributaries to the River below the Bighorn Dam. The drainage area above Lake Abraham is mountainous and does not contribute a proportionate share of flood runoff. Hence, the reduction in magnitude of the flood stage which this project provides is relatively small. It is estimated that the June 25, 1972 flood peak of 66,300 cfs at Rocky Mountain House might have been reduced to 59,000 cfs if Bighorn had been in operation, with a consequent 0.7 foot lower stage.

The easterly half of the drainage basin of Brazeau Reservoir lies outside the mountains and is subject to rapid runoff from rainfall events. The reservoir may reduce the outflow by a significant amount. The later the flood inflow occurs, and the higher the water level at the start of such inflow, the greater is the chance of requiring spill at Brazeau Reservoir. On June 26-27, 1972 a spill of 14,100 cfs was required after the reservoir level had risen ten feet from three days of rain. This spill plus the power plant discharge

represented a reduction of 19,000 cfs from the peak inflow to the Reservoir. It is estimated that the peak flow of the North Saskatchewan at Lodgepole (June 26) was reduced by 10,000 cfs and at Edmonton by 8,000 cfs. Since the actual peak discharge at Edmonton was 113,000 cfs on the evening of June 27, the effect of Brazeau storage on downstream river flow was not large.

### Recreation

The Brazeau Reservoir was not cleared at the time of construction of Brazeau Dam. In the past 3 years, Department of Lands and Forests has cleared and burned standing timber fringing the full supply level of the Lake and used a barge, booms and a crane to gather floating logs for burning along the north arm of the main dam. This work is continuing. It is believed that the Lake has recreational possibilities when clearing of timber is completed. Its maximum drawdown, sixty feet, occurs in mid-April and by late June the Lake level is only 10 to 25 feet below the full supply level. At the present time the power canal is more suitable for boating than the Lake and a boat ramp is available for launching.

The North Saskatchewan River valley breaks through the First Range of the Rockies at Windy Point of Lake Abraham. Strong winds from the west are deflected through the gap and result in the downstream half of the Lake being very dangerous for small boats. Fall is the windiest period, with occasional days recording gusty winds over 50 mph at the main dam where the 1972 record reached 115 mph. Consequently, the Lake is viewed as having low boating potential except in its southerly part. Since this part is shallow and fills

from July onward, its period of use is limited. The spectacular scenery and the ease of access on the David Thompson Highway, which parallels Lake Abraham will attract many people to the area. As lands around the reservoirs are leased from the Crown for water power purposes only, development for any other purpose is under the Government's control.

#### PROSPECTS FOR ADDITIONAL FUTURE LAND USE AND RESOURCE DEVELOPMENT

The North Saskatchewan River Basin within the Study Area has been thoroughly explored by the Company for power and storage sites. Lake Abraham provides adequate storage for the mountain reach of the main River. No other site appears to exist for economic development of storage farther downstream on the main river or on its tributaries, the Ram and Clearwater Rivers.

The Brazeau Reservoir at today's full supply level of 3,170 does not provide full control of the Brazeau River inflow and a Crown reservation exists for potential future extension of this Reservoir to elevation 3,200 should this ever be shown to be in the public interest. The additional flooded area, 3,170 to 3,200, would cover 7,700 acres and increase the gross storage volume from 395,000 acre-feet to 1,020,000 acre-feet, with very real potential for reserve storage.

As an alternative to raising Brazeau Reservoir to elevation 3,200, two storage sites on the upper Brazeau River are known to be topographically capable of development:

- Olympus, 4 miles upstream of the confluence of Job Creek; storage 200,000 acre-feet in 140 feet of drawdown. The left bank portion of the reservoir site lies within Jasper National Park.

- Opabin, 2 miles downstream of Opabin Creek;  
storage 310,000 acre feet in 80 feet of drawdown. The  
left bank portion of the reservoir site also lies within  
Jasper Park.

Development of storage on the upper River, if found desirable, could be accompanied by construction of ten hydro plants having a total installed capacity of 550 MW along a 50-mile reach of the River.

The Big Bend power development has two generating units at present, of 165 and 190 MW capabilities, respectively. Construction included provisions for potential future installation of two additional units. Consideration of the installation of these units must include the possibilities of:

- Raising of the power canal operating level from 3,148 to 3,155 with flooding of a further 1,250 acres along its south margin.
- Installation of a regulating headpond at O'Chiese site, on the Brazeau eight miles downstream of Big Bend plant, or at Brazeau Forks damsite, on the North Saskatchewan three miles downstream of Brazeau confluence.
- The use of reversible pump-turbines to provide for pumped storage at Big Bend.

The headponds of the alternative O'Chiese and Brazeau Forks sites would both back water up to the Big Bend power plant. O'Chiese would have a small pondage volume and flood a limited area in the Brazeau valley. Brazeau Forks would flood some 8,000 acres, including river channels, in the Brazeau and the North Saskatchewan valleys.

Power developments on the North Saskatchewan River downstream of Bighorn which would utilize Lake Abraham storage are not currently being studied by the Company. Site capabilities are relatively small. The Company believes that development of a low head power site may ultimately be desirable to assist in formation of the ice cover above Rocky Mountain House. A suitable site exists at Horburg, 19 river miles upstream of Rocky Mountain House and 62 miles downstream of Bighorn Dam. The Horburg site would immobilize inflowing slush ice formed in the swift river between Bighorn and Horburg in the same way that Bearspaw catches the inflowing slush ice formed below Ghost on the Bow River. The Horburg headpond would be wholly contained within the valley and extend about 8 miles upstream to the mouth of the Ram River.

Increases in the installed generating capacity in the Basin would require some additional transmission. Where new plants were involved new rights-of-way would also be required, but plant extensions might in some instances be handled by rebuilding lines at higher voltage on existing rights of way. It must also be remembered that there is not an extensive transmission and distribution system within the Study Area at the present time. Extensive rights-of-way will be required to provide for the lines that will be needed to serve the various recreational, mining, oil and gas, and industrial facilities which are being proposed. Firm plans for such transmission lines must await fuller knowledge of such developments, but it is clear that overall planning for the area must recognize the need for them.

## SUMMATION.

A brief description of the Brazeau Reservoir, the Big Bend Power Development and the Bighorn Project has been given, with emphasis on the lands occupied by the projects and their associated transmission and on the management practices which are envisaged for the full development of the water resources of the region.

The total area occupied by the existing projects is 31,000 acres, about 48.5 square miles or 0.7% of the drainage basin within the Study Area. Over 95% of this area, 29,600 acres including original river channels is occupied by the two reservoirs and the Big Bend power canal. A further 2,800 acres of transmission line rights-of-way are located in the Study Area. Access to some project areas is limited for reasons of public safety, but the use of the land does not preclude complementary use by others, and, in the case of the Brazeau Project, has improved access to that part of the Study Area.

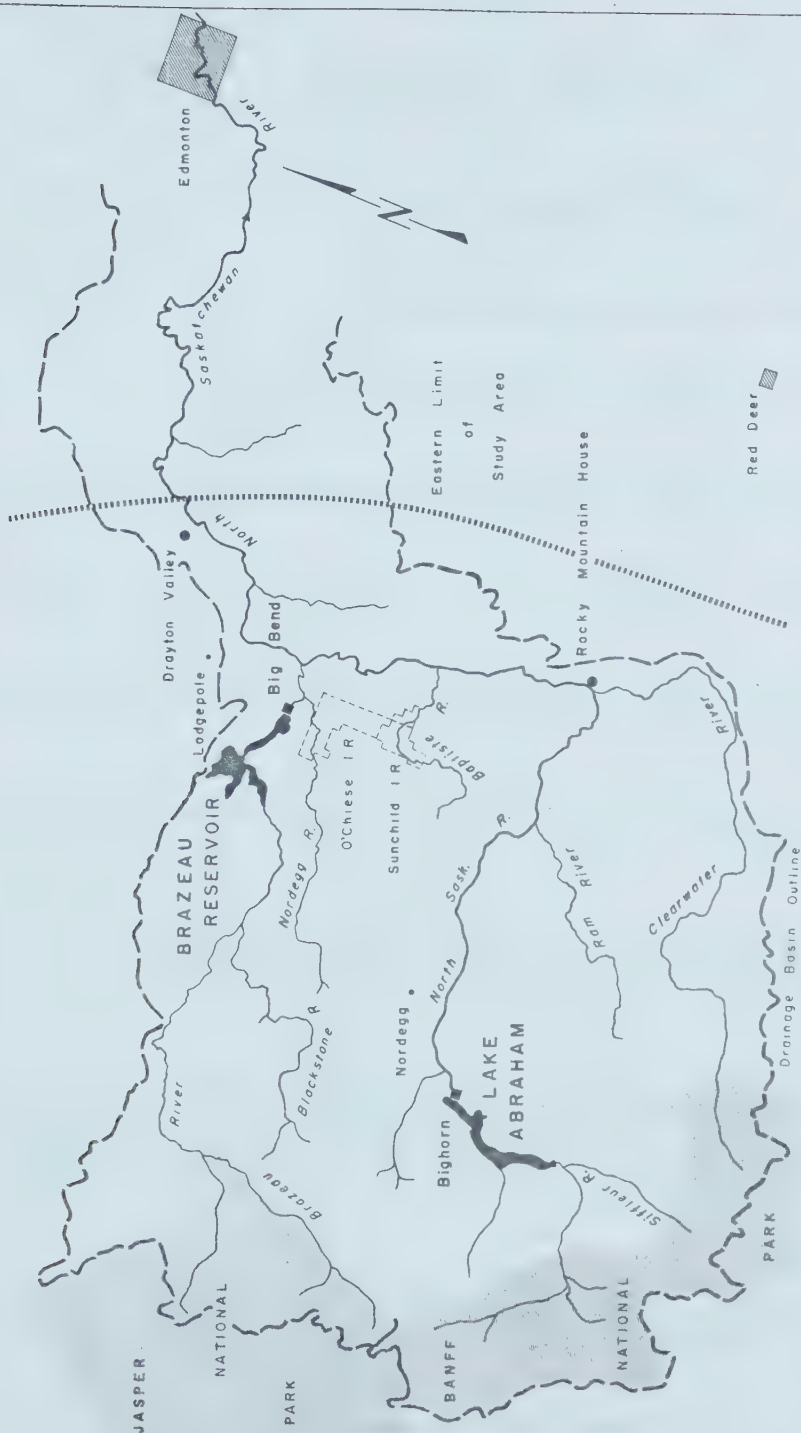
The Brazeau and Lake Abraham Reservoirs were built in order to store surplus summer water for release during the low water season to augment the flow available in the North Saskatchewan River downstream from Edmonton. Some 0.9 to 1.5 million acre-feet of stored water will be available in the reservoirs at the beginning of the drawdown period. There are some restrictions on the rate of release during the period when ice is forming on the River, but greater than average winter flows can be maintained throughout the critical period from late December to late March when full ice cover at and downstream from Edmonton prevents the renewal of dissolved oxygen content.



The Big Bend and Bighorn power plants, which were built in conjunction with the reservoirs, generate about 800 million KWHRS per year for use on the integrated system. The sharing of costs for the projects was based on the premise that Calgary Power customers should pay no more for power from these sites than from alternative sources available to the Company at the time of construction.

The reservoirs also provide benefits in the form of recreation, limited flood control, and facility for possible future diversion for irrigation.

The Brazeau Reservoir and Big Bend Power Development and the Bighorn Storage and Power Project are outstanding examples of cooperation between Government and private enterprise to satisfy complementary goals.



CALGARY POWER LTD.

NORTH SASKATCHEWAN RIVER DRAINAGE BASIN  
SHOWING

STORAGE AND POWER DEVELOPMENTS

SCALE IN MILES  
0 10 20 30 40

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

What is the maximum draw-down on the Brazeau reservoir and also what is it predicted to be on Lake Abraham?

MR. STANLEY:

In the Brazeau reservoir it is 60 feet.

MR. KINISKY:

What are you predicting it will be on Lake Abraham?

MR. STANLEY:

If we were to go the full range in any one year, the maximum would be 120 feet on Lake Abraham.

MR. KINISKY:

Would this be an extremely unusual kind of year?

MR. STANLEY:

No, we'd go through the bulk of that cycle each year. It may be 10 or 20 feet off.

MR. KINISKY:

When you look at a draw-down of, say 120 feet, doesn't this put aside the recreational value quite considerably?

MR. STANLEY:

Yes it does. We have always maintained that it detracts from the recreational value, although by mid-July the elevations are fairly well up. I think the wind situation on Lake Abraham detracts from the recreational value.

MR. KINISKY:

We have had discussions with the regional planning commissions concerning the use of land, not only for transmission lines but for highways, railroads, gas transmission lines and so on. Has Calgary Power had discussions with some of these groups so that one corridor using a minimal amount of land can be used to carry all these utilities?

MR. STANLEY:

Yes, not too extensively but we have had some discussions on corridor bases and on several occasions we have actually followed highways with the lines.

MR. KINISKY:

Are you generally amenable to this kind of thing?

MR. STANLEY:

Oh yes, very much so. It's a case of not getting in one another's way.

# THE ALPINE CLUB OF CANADA

Canada's National Mountaineering Club



LAND USE AND RESOURCE DEVELOPMENT  
IN THE  
EASTERN SLOPES OF THE ROCKY MOUNTAINS

A Brief  
submitted to

The Environment Conservation Authority  
Province of Alberta

by

The Alpine Club of Canada

Presented By: Dr. H. W. Habgood

A handwritten signature in dark ink, appearing to read "S. D. Rosenbaum".

S. D. Rosenbaum, President

A handwritten signature in dark ink, appearing to read "H. W. Habgood".

H. W. Habgood, Chairman,  
Conservation Committee

June, 1973

### Land Use and Resource Development in the Eastern Slopes

The Alpine Club of Canada is grateful for the opportunity to offer its views on Land Use and Resource Development in the Eastern Slopes of the Rocky Mountains. The Club, founded in 1906 and with a present membership including section associates of some 2500, has been associated from the beginning with the Eastern Slopes; it is now in the process of vacating its historic clubhouse on the side of Sulphur Mountain in Banff to move into a new clubhouse in Canmore.

In addition to "the encouragement and practice of mountaineering . . .", the objects of the Club include "the education of Canadians in appreciation of their mountain heritage" and "the preservation of the natural beauties of the mountain places and of the fauna and flora in their habitat". The mountaineering activities of our members range from high-country hiking in summer and ski-touring in winter to ascents of the highest grade of difficulty. Members are also active in mountain hiking, nature study and photography. The Club and its Sections organize instructional classes for beginning climbers. Although the climbing camps and expeditions organized by the national Club have tended to concentrate in the areas of the higher peaks in the national parks and in British Columbia, members of the Calgary and Edmonton Sections do considerable climbing in the eastern slopes region under consideration. A spectacular group of high peaks near Kananaskis Lakes has received considerable interest from climbers. Excellent rock climbing can be found in the hard limestone of the easternmost ranges; perhaps the best-known is Mount Yamnuska just north of Highway 1A.

Mountaineering is a challenging sport requiring a high degree of physical fitness and training. It promotes a greatly deepened awareness of the mountain environment and is essentially non-consumptive and non-damaging to the environment. We require very little in the way of facilities: construction of roads makes the mountains more conveniently accessible but we are concerned that too many roads can seriously detract from the wilderness environment that is part of the reason we visit alpine areas. We support the construction of foot trails for hiking in the mountains and foothills and

these trails will frequently be used also by climbers. We hope that hiking, scrambling, and climbing will be acknowledged as desirable activities throughout the Eastern Slopes.

The Club commends the Authority for considering the full length of the Eastern Slopes in a single series of hearings. In this brief we are responding with general recommendations for the whole region. Through our local sections in Calgary and Edmonton we are also submitting separate briefs with specific suggestions for the individual watersheds. The suggestions in this general brief are primarily from our members in Alberta but they have been supported by members from other parts of Canada who also know and enjoy many of these areas.

#### GENERAL RECOMMENDATIONS FOR MANAGEMENT OF THE EASTERN SLOPES

1. Watershed conservation and recreation should be the principal uses. The Eastern Slopes have, for many years, been reserved for watershed protection and this objective should be reaffirmed. Outdoor recreation is generally compatible with the watershed protection and, because of its increasing importance and its contribution to the quality of life in Alberta, should have high priority.

The exploitation of other resources should be done so as to cause no long-term interference with these main uses. In any mineral extraction the period of disturbance must be kept short and the total area under disturbance at any one time kept small. In light of the intensive pace of development in recent years, the policy should now be one of extreme caution and conservatism in the exploitation of non-renewable resources.

For renewable resources policy should combine the objectives of sustained yield and maintenance of diversity. Wildlife management should sustain the full range of animal species including native predators. Stock-grazing in provincial forest land is objectionable to us and we feel that it should be critically examined. Lumbering should be carried out by methods that do not lead to the virtual elimination of some tree species or of distinctive areas of mature forest.



2. Biological productivity should be a principal factor in detailed planning and management. Thus areas with good rainfall and growth rates - frequently along valley bottoms - can recover more rapidly from damage and so are preferred locations for roads, campgrounds, and intensive recreational facilities. Yet in some places these are critical game areas and should be protected from excessive intrusion. A problem throughout the Eastern Slopes, in the south generally and at higher elevations in the north, is the low moisture level which makes recovery from any disturbance to the ground particularly difficult.

3. The Eastern Slopes are under joint jurisdiction. Management of the national parks and of the provincially administered areas should be complementary and consistent. In our brief to the federal government concerning the provisional master plans for Banff, Jasper, Kootenay, and Yoho parks, we suggested that these parks should include the cores of wilderness areas which, taken together with adjoining provincial land, would be adequate to protect all of the large-animal species. Thus it is our hope that much of the land adjoining the national parks will be kept in a primitive state. At the same time we suggested that certain regions outside of the parks should be assisted to establish the recreational facilities and tourist services wanted by the public.

4. The Eastern Slopes can meet a wide range of recreational needs. As a mountaineering club we encourage types of recreation - mountain hiking, scrambling, climbing, nature observation and photography - that are based on individual effort and require a minimum of supporting facilities. These activities yield a high return in human satisfaction at low cost to the environment. We recognize, however, that people have other outdoor recreational interests and that many can be met within the Eastern Slopes.

5. The Eastern Slopes cannot supply all mountain recreation needs of Alberta and Western Canada. British Columbia and the Yukon have much more extensive mountainous areas than does Alberta and can offer a greater variety of recreational possibilities. Alberta should be cautious about encouraging excessive development or facilities that are only marginally suitable, just to have them in Alberta. Downhill

skiing poses a particular problem. Snow conditions east of the Divide are generally much poorer than in British Columbia yet it is clearly desirable to have some hills as close to major centers in Alberta as possible. The government should insist on good snowfall and snow-depth data over several years before allowing or supporting new ski resorts on Crown land.

6. Zoning is essential to sound management. Areas of high protection adjacent to the national parks augment the wilderness portions of the parks. The present provincial Wilderness Areas already meet this requirement but would benefit by the establishment of buffer zones as well - as provided for in the Wilderness Areas Act. The degree of protection in Willmore Wilderness Park should be greatly increased, to justify its name while augmenting the wilderness portion of north Jasper Park and to restore public confidence in the government's commitment to land preservation. Zoning must also provide for other areas of high protection as mentioned in the next paragraph and, in addition, other zones will allow for developed campgrounds and picnic sites, special interest facilities, and service centers. We support the establishment of major service centers adjacent to the national parks on the main access highways. In particular this would mean development zones close outside Jasper Park on Highway 16 and near Banff Park on Highway 11. Commercial proposals for facilities in these areas should be judged as to how well they will meet the total recreational needs of the public in these places.

7. We endorse the Wildland Recreation Areas and the Elbow-Sheep Wilderness proposals of the Alberta Wilderness Association as representing areas deserving special attention. We would, however, modify their proposal to the extent of permitting some service center development adjacent to the national parks, e.g. in the Folding Mountain area (although we have serious reservations about the particular development that has been proposed there).

8. Exploitation of non-renewable resources, generally speaking, is suitably covered by regulations but we have particular concerns about surface reclamation and about seismic lines in exploration.

In our opinion it is not yet adequately demonstrated that reclamation of surfaces disturbed by exploration and stripmining can be carried out above treeline.

The natural revegetation of abandoned surface minesites is slow and little growth masks the spoil piles, access roads, and pits left from earlier mining operations. Artificial revegetation faces similar problems because of the inability of spoil materials to retain sufficient moisture in the surface layers for plant growth, the abrasion of seedlings by dust and snow, dessication by winter winds and chinooks, and the short growing season. To some extent these factors may be offset by the use of fertilizers, mulches, organic material, and stock-piled soil layers. The real test is whether the plant cover thus started can survive on its own after the first few years and this remains to be shown.

It is essential that disturbed land be returned to a condition where it is aesthetically pleasing and has a continuing value for its biological resources. The cost of reclamation including allowance for the time involved is a proper charge against the resource and must be considered in making any decision to allow surface mining.

Exploration affects much more land than does actual mining or production. With the prospect of increasing exploration for natural gas in the foothills, we recommend a tightening of restrictions on the allowable density of seismic cut lines. These create long-lasting scars and use up too much forest. Multiple use of the same line should be required.

9. Logging practices should provide for diversity and for a sustained yield of the full range of trees. Clearcutting should be confined to small patches; large areas of clearcut are unsightly, seem to be relatively barren of big game, and prone to quick run-off. There should be stricter restrictions on logging at high altitudes. Some areas of mature or over-mature forest should always be preserved. Diversity is a primary factor in the enjoyment of forest lands and with considerate management, the woods being harvested for timber can also provide attractive walking trails.

10. Particular care is necessary near tree line. As already noted, reclamation of the land surface is particularly difficult at and above tree line. It is important also to protect isolated plant communities which may not be able to re-establish themselves if damaged. There are numerous clumps of very old trees which are most picturesque and also important for watershed conservation and these should not be

harvested because regrowth is so slow and uncertain. In places where the trees were killed by fire in past years, the relic stumps should be protected, both for the stabilization of the ground and because of their inherent beauty.

It is near tree line that hiking is most enjoyable and while we encourage hiking as a particularly rewarding way to visit the alpine areas, we urge great care in establishing hiking trails to be sure that they will cause minimum damage. Work carried out recently by the Research Council of Alberta for the Canadian Wildlife Service on the assessment and relocation of part of the Great Divide Trail in Banff Park is an example of applying the best knowledge available to minimize trail damage.

11. Stock grazing should be reduced. We feel that a careful review of current grazing-lease practice would show that, considering the alternate productivity for native game and the nuisance to campers and picnickers caused by herds of cattle, many of the present lease terms cannot be justified.

12. Roads. Generally speaking, the Eastern Slopes region already has enough established roads. These include the forestry trunk road, various east-west connecting roads, and a portion of the provincial highway grid through the established settlements to the east. With increasing usage and more serious dust problems there will be a need for improving and paving some of these roads. An early priority is the highway grid roads which can offer a high speed access to different parts of the Eastern Slopes and distribute visitors past the various towns where they can contribute to the local economy. Paving will also soon be necessary on some of the connecting roads and on those portions of the forestry trunk road which receive heaviest usage. No attempt should be made to encourage through traffic on the trunk road. Much of it is not spectacularly scenic and it can best be enjoyed at relatively slow speed and in short sections. For the most part, paving of the trunk road and many of the connecting roads should be done without much straightening and without the conventional wide right-of-ways and ditches that keep the natural countryside so far from the road. Instead, numerous passing lanes and turn-offs should be provided. There is room for several more campgrounds in the forested portion where they can be most attractive and do little damage.

13. Present undeveloped roads and jeep trails are widespread over much of the Eastern Slopes. Some of these can be partially improved and stabilized to give access to campgrounds, etc. There should be no development of loop routes, however. Many of the other undeveloped trails should be closed off to protect the wilderness environment. Otherwise there will be overpowering pressure on game animals and also serious erosion and loss of ground-cover. There must be restrictions on the use of 4-wheel drive and all-terrain vehicles off established roads. These vehicles can do irreparable damage to dry slopes and alpine areas. The restrictions will inevitably become more severe as usage increases. We think the most practical way is to restrict mechanized off-road vehicles to designated areas with, if necessary, special provision for regulated limited access to other areas for justifiable purposes. The government should provide a clear policy statement so that persons buying such equipment will be aware of probable limitations on use.
14. Visitor services should be grouped in a limited number of designated locations. Unrestrained ribbon development will seriously degrade the attractiveness of the whole area. Obvious locations for such service centers are on the major highways leading into the national parks. There will be room for a few others but caution should be exercised in increasing the number of service centers. A number of the proposed commercial developments would, with some modifications be incorporated into a reasonable pattern of service centers; others, which are much more obtrusive into the natural areas, we oppose.
15. No leasing for private use. The leasing of Crown land in the Eastern Slopes for individual private cottages, etc., is unjustifiable. Desirable sites, particularly with water frontage are too scarce to allow private individual use that would restrict them from the public. Even in areas that seem to have little interest for visitors at present, any leases if granted should be for not more than 10 years.
16. Leases should be available for hut and shelter construction to recognized organizations with a bona fide recreational interest in the Eastern Slopes. We support the plans of the Canadian Youth Hostels Association to build a chain of hostels; such facilities provide the widest possible access with minimum disturbance. In areas of heavy use a hut is less obtrusive and damaging than concentrated camping.



Although the long-term plans for hut construction by the Alpine Club at present give low priority to sites in the Eastern Slopes, the Edmonton or Calgary Sections, or in future the national Club, may wish to build mountaineering huts or high-altitude shelters. These would be at different locations from those of the CYIA and would complement their chain of huts.

Present policy of the Club provides that huts are generally locked and available for use only by members. This has been necessary both to obtain the financing to build them and to maintain them in good condition. Since membership in the club is open to anyone this policy does not significantly restrict their availability. Recently we have been successful in maintaining custodians at some of our more popular huts during the busy season. These persons have been effective in keeping the huts and their surroundings in good shape even under heavy use and have also been able to admit some non-members when space was available.

We hope that any future requests for leases for the construction of mountaineering huts by the Alpine Club will receive sympathetic consideration.

17. More intensive management will be necessary to match the increasing intensity of recreational use. The whole of the Eastern Slopes within the green zone should be considered as a recreational area - primarily a primitive recreation area. It needs an expanded ranger-naturalist service to protect the natural features, to help visitors enjoy it in the ways most satisfying to themselves and least damaging to the land; to police(hopefully only to a minor extent), and to educate through, perhaps, formal programs at campgrounds and also informally by being available for advice and information. Many of the services developed for provincial parks can be extended to campgrounds in the Eastern Slopes. We strongly support the decentralization of ranger services and hope that individual rangers will each live in and become familiar with a particular area.

18. We hope that following these hearings, the Government of Alberta will set forth a comprehensive policy along the lines we have indicated and that it will accept and declare the principle that significant changes in that policy should be accompanied by public hearings.

19. Hiking and Camping are the principal recreational uses that we want to see encouraged. Although we are well aware that large numbers of hikers can do serious damage to some alpine areas, we consider travel on foot in the high country to be such a rewarding activity that every effort should be made to provide for it. Primarily this is a matter of building good trails - they should be on solid, well-drained ground and avoid meadows and unstable slopes. Good drainage without erosion is of first importance. Problems are minimized if trails are not excessively wide - room for one person is adequate for the most part - there are always numerous easy places for people to pass. The trails should be built primarily for hikers and this means that foot bridges over streams are essential. If the trails are solidly built, they can be used to a limited degree by horses as well but it must be accepted that horse traffic will be restricted as traffic increases to the point where damage occurs. People must have first priority. And, finally, there can be no justification for allowing trail bikes or similar vehicles on trails; they are too obtrusive and their potential for damage is too great.

The trail system will be built primarily for hikers. It will, of course, be used also by climbers but they will need no special trails.

Campgrounds of various degrees of elaboration should be provided. The lower forested areas can accommodate large numbers of campers. Garbage disposal is best handled by regular and efficient pickups from campgrounds on roads and by promoting a carry-out policy for all other campgrounds. This latter will require continuing positive encouragement by wardens, hut custodians, etc., in order to be effective.

Parallelling the spread of mechanized camping, we see a strong return to simple tenting. We hope that experiments can be done to further encourage this. For example, try some campgrounds relatively close to the road but still needing a walk of 1/4 to 1 mile from the car. These would offer a little more taste of a



wilderness experience and would encourage people to venture a little further with modern light-weight equipment. Soon they would experience the joys of real back-packing.

.

-----

Good health and physical fitness are precious gifts that are freely available to most Canadians. Unfortunately, many ignore their importance until too late. Walking and climbing in forest and alpine wildlands is a priceless tonic for both body and spirit. The Eastern Slopes give the opportunities and this is their greatest value to the people of Alberta and Canada.

LAND USE AND RESOURCE DEVELOPMENT  
IN THE  
EASTERN SLOPES  
ATHABASCA RIVER BASIN

A Brief Presented To The  
ENVIRONMENT CONSERVATION AUTHORITY

By The  
EDMONTON SECTION  
ALPINE CLUB OF CANADA

A handwritten signature in dark ink, appearing to read 'A. S. Rankin', written over a horizontal line.

A. S. Rankin, Chairman

## INTRODUCTION

The Alpine Club of Canada is submitting a brief outlining its views on the general principles that should be applied in determining land use on the eastern slopes of the Rockies. The Edmonton Section of the Club supports the general recommendations of the National Club and in this brief we wish to refer to specific proposals for the Saskatchewan River Basin.

## GENERAL DESCRIPTION

The Saskatchewan River Basin and topography consists of rolling forested foothill country rising until reaching the rocky inclines that form the first ranges of the Rockies running from S.E. to N.W., from Mountain Park through Brule Lake into Willmore Wilderness. The vegetation ranges from conifer forests to alpine wooded valleys to high alpine barren areas and meadows. It is interspersed with numerous rivers. The area is rich in game and animal life of a wide range.

Underlying the surface are extensive deposits of coal, oil and gas that run parallel to the mountains along pretty well the whole width of the basin.

## PRESENT SITUATION

1) There are two settlements, Hinton and Grande Cache, that depend on industrial development and exploitation of resources for their survival.

2) Major industries - Oil and gas extractions and processing, wood pulp production, and coal mining--that are already established with vast amounts of capital invested.

3) Extensive existing destruction of the natural environment from logging, oil, gas and mining that make enormous stretches of the area look like major disaster areas comparable to the Swan Hills region.

4) Agreements have already been made with commercial interests for further resource exploitations for practically the whole area under consideration.

5) There is a degree of pressure from large population centres to the east for further settlement and private ownership of land.

### SCOPE OF THE PROBLEM

There is a conflict between groups such as ours, and fish and game interests who wish primarily to be able to enjoy the mountain and foothill regions in their unchanged state, tourist organizations and the mining, pulp and oil industries.

By and large the interests are incompatible as large scale exploitations of resources generally will result in destruction of the natural environment and general deterioration.

### RECOMMENDED GENERAL PRINCIPLES

Our group recognizes that pressure for continued economic development will be irresistible and make the following recommendations:

- 1) That Strategy C be followed with regard to Resource Exploitation.
- 2) That methods of resource exploitations be subject to close control and restriction to protect natural features.
- 3) That zoning be put into effect in the area so that tourist centres and roads are established on a rational basis, areas that are to be sacrificed for resource exploitations are rigidly demarcated and irreplaceable prime areas should be set aside where only very rigidly controlled development be permitted.

### ACCOMMODATION AND SERVICE CENTRES

Accommodations and services should be developed at a limited number of centres on the existing road network. Haphazard and ribbon development should be prevented or where it already exists as along Highway 16 west of Hinton should not be allowed to extend. In particular, we suggest that services near the mountains should be concentrated in these places: on Highway 16 just east of Jasper Park, in the vicinity of Cadomin or Mountain Park, and at Grand Cache.

Just East of Jasper Park the Overlander Lodge, Circle M Ranch and the Folding Mountain Resort provide the nucleus for a service centre. The pulp mill lease seriously limits available land close to the road and we would oppose massive intrusion into the highly scenic Folding Mountain area. Consequently, a compact development providing a wide range of accommodation facilities for all classes of visitors is what is needed. Some modifications in the proposed Folding Mountain Recreation Area are called for from this point of view - it must be integrated with other developments and must not take nearly all the available land unless it provides the full range of facilities. It would not be fair in this limited area to provide private residences - these should be at Hinton or Grand Cache. We refer to the skiing aspect of the Folding Mountain proposal later.

The Cold<sup>1</sup> Branch should be planned for ultimate use as an accommodation and service centre. In many respects Mountain Park is the most attractive setting and could provide an excellent example of the restoration of a former mine site.

Similarly Grande Cache is ideally situated as a service centre for visitors to the Willmore Park and should be encouraged to develop along these lines.

We oppose the present private cottage development at Rock Lake. The lakes in the foothills are a scarce resource and should be open to all Albertans.

### RECREATIONAL ACTIVITIES

#### Hiking and Climbing

High country hiking and climbing are attractive along the western edge of the basin. The Willmore Wilderness Park, the Folding Mountain area, and the region around Mountain Park already have numerous trails and should receive a high degree of specific protection. In particular, the intrusions into Willmore Wilderness Park should be phased out. These belie the name and cast serious doubt on the credibility of the government's interest in preserving wilderness and watershed values.

Of all of the basins under consideration this one has the greatest area of forest. These forest lands have a variety of recreational possibilities including camping, hiking, fishing, boating and canoeing on the numerous streams. Because of the lower altitude, good rainfall and consequent faster growth, these forests can take more use and recover more quickly from damage than some drier and higher parts of the Eastern Slopes. We recommend imaginative experimentation in the development of campsites, trails,, river access sites, etc. to encourage recreational use subject to adequate protection for key game areas.

#### SKIING

Downhill skiing is an increasingly popular winter sport and for people in the Edmonton area it would be desirable to have one or more additional alpine developments to augment the present facilities at Marmot Basin. The main problem is to find a place with sufficient snow; along the Eastern Slopes the snowfall is low and the frequent Chinook winds remove much of the snow cover. In considering any proposal for an alpine ski resort the foremost factor is the quantity and duration of snow. The Folding mountain proposal is deficient in this respect - the data are incomplete and insufficient. Measurements over several years are necessary. We are unable to state whether or not there is adequate snow in the Folding Mountain area; it may be significant that the Canada Land Inventory map of Recreation Capabilities shows only one area along the Eastern edge of the mountains and this is some distance southeast of the Folding Mountain area - somewhat beyond Mystery Lake. Access here would be relatively easy from the Hinton Luscar road and this possibility should be seriously considered. In any case, before we allow the inevitable scarring that accompanies a ski development, we must be sure that there is a reasonable chance that it can provide good skiing.

The Silver Summit Ski Resort provides a different type of skiing. This resort caters to a well developed need and we would not oppose expansion to meet increasing demand. This resort will probably also develop as a centre for cross-country skiing although cross country skiing actually requires very little by way of special facilities and can be carried out anywhere in the basin.

We agree with the Alberta Wilderness Society that there are areas in the Rockies which should be zoned as High Wildland Recreation Reserves. Motorised vehicles should not be allowed within the borders of these areas nor should any commercial or mining development be allowed. Where it is possible, High Wildland Recreation Zoning Areas should also be used as buffer zones between wilderness areas or National Parks and the green belt.

In the Athabasca River Basin we would recommend High Wildland Recreation Zoning for the mountain range area extending from immediately west of Mountain Park and the Cardinal River Valleys up to the Folding Mountain area. This areas beauty and accessibility make it a prime area for hiking, climbing and riding activities. This area should further extend up to the Rock Lake region and the Willmore Wilderness Park.

Our main zoning request however relates to the Willmore Wilderness Park. This area is unique in its flora and fauna and if preserved and properly managed by a Provincial Park Service would provide a great and accessible area for future generations to enjoy. We therefore urge that the boundaries of this park be rigidly delineated immediately and that existing permits for development and exploration be immediately revoked.



### PROPOSED COMMERCIAL DEVELOPMENTS

We have examined the proposals for commercial facilities in the Athabasca Basin and would like to make the following comments:

- 1) Silver Summit Alpine Village - we are in favour of this proposal subject to snow studies and plan supervisions.
- 2) Folding Mountain Recreation Area.  
The area adjoining the Highway is suitable for tourist and group service centre but development on this prime area should be restricted to High Wildland.
- 3) Sundance Recreational Vehicle Park.  
We would recommend that this be located near Edson or Hinton. Isolated Highway developments of this kind would eventually lead to ribbon type development.
- 4) Cadomin Yourth Hostel.  
We endorse this proposal.
- 5) Other proposals.  
Isolated campground developments in this Highway area should be planned and concentrated in nodal areas so that road travellers are still able to appreciate a largely undeveloped area.

### ALPINE CLUB HUTS

The Alpine Club has pursued a policy of building a few small climbing huts in high mountain areas that are open to all persons travelling to high regions. While there are no specific plans for any huts in this area we would like to urge that when master plans are drawn up that provision be made to allow for this type of structure in carefully controlled and selected areas by groups such as ours.

The Edmonton Section, however, will presently have to vacate its present hut at Disaster Point near Pocahontas. It will be vital to our continuing existence as an organization that we obtain a replacement site in the same general area.

The Section will be making applications at a later date for allocation of a small site with Highway 16 access within reasonable distance of the Jasper Park entrance.

## QUESTIONING BY THE AUTHORITY

MR. DOWLING:

You are not petitioning for anything special for the Alpine Club of Canada, but rather making general comments on the future use of the eastern slopes?

DR. HABGOOD:

We warned you that we might petition to build huts similar to the youth hostels although any huts we build probably would be at higher elevations.

As with the youth hostels, the present huts are open to members. Our membership is open but the present huts are locked. This is mostly for maintaining them. Where we have high use we try to have a custodian and then it's possible to let non-members in as well. There is a lot of uncertainty in the club as to how much farther it should go in building huts, whether building huts encourages intrusions into wilderness where people would not otherwise go. This is quite a flexible subject.

MR. DOWLING:

Have you discussed designated sites?

DR. HABGOOD:

Not specifically. In general these would not be in the Athabasca basin. I would, perhaps, make one reservation. We do have a hut in a national park near Pocahontas which the club may be asked to leave. This is really just a convenient overnight centre on the road. Some of the main users in the Edmonton section might like to have alternative accommodation, either in the Folding Mountain area outside, or conceivably at Hinton. This is a somewhat different category from a high climbing hut.

MR. DOWLING:

Have you ever been accused of running a second class motel business?

DR. HABGOOD:

Yes, this accusation has come. This is a problem we worry about.

MR. DOWLING:

What is your position with respect to the Alberta Wilderness Association's proposals for wildland, and proposals put forward by the Canadian Youth Hostels?

DR. HABGOOD:

I think we would recognize the AWA proposals as pointing out important areas that are attractive for the kinds of recreation we like, where vehicle access and resource development should be prohibited or strictly limited.

We don't feel quite as strongly as they would, and would incline somewhat more to Dr. Laycock's point of view. I think the problem, as everyone recognizes, is that we're prepared to be reasonable if we can

be sure the government will retain its principles. If one can have a firm designation of wilderness, then we're sure it will stay as wilderness.

MR. DOWLING:

These club activities take place in the mountains 12 months a year and members go to a wide variety of quite inaccessible places. What is the club's position on the use of snowmobiles?

DR. HABGOOD:

Most of our members don't like them. In the case of the national parks we have suggested that for outfitting remote cabins they can be justified. For long trips they can have some advantages. But primarily, you go into the mountains in the wintertime for your own personal enjoyment, and whether you go 100 miles or 10 is perhaps less important than how you feel when you are doing the trip. Doing 10 miles on foot for most of us, I think, is probably as satisfying as doing 100 miles on a snowmobile, probably more so.

CONCERNS OF THE EDMONTON REGIONAL PLANNING COMMISSION

A BRIEF presented to the Environment Conservation Authority  
at the Hearings on Land Use and Development of the Eastern Slopes.

Presented the 6th day of July 1973 at Edmonton

Edmonton Regional Planning Commission

Presented By: N. Giffen

CONTENTS

1. EXPLICIT CONFLICTS IN THE DEVELOPMENT OF THE EASTERN SLOPES
2. CONTROLLED DEVELOPMENT OF THE EASTERN SLOPES AND ITS RELEVANCE TO  
THE EDMONTON REGION
3. CONCLUSIONS

# 1. EXPLICIT CONFLICTS IN THE DEVELOPMENT OF THE EASTERN SLOPES

1.1 In analyzing the development potential of this area several major conflicts become immediately apparent. These conflicts are between;

- (i) ENVIRONMENTAL PRESERVATION POLICIES
- (ii) LARGE SCALE RECREATION DEVELOPMENT POLICIES
- (iii) INDUSTRIAL AND ENERGY RESOURCE DEVELOPMENT POLICIES
- (iv) WATERSHED MANAGEMENT POLICIES

1.2 The NEEDS, WANTS and VALUES of Albertans with regard to any proposed development have yet to be established with any certainty. This is the purpose of the Public Hearings. However it would be safe to assume that generally, large support could be found for each major proposal and against each proposal. The problem facing the Province and those regions directly and indirectly affected by the various development proposals, is to tap and weigh these explicit VALUES, establish GOALS and POLICIES which will aim at the fulfilment of these VALUES, establish a framework of PRIORITIES for (or against) development and formulate a matrix of PLANNING OBJECTIVES through which the established POLICIES can be implemented.

1.3 Again, in general terms, arguments can easily be found to justify or deny each individual proposal. However, the Eastern Slopes do have immense latent potential for:

- (i) PUBLIC RECREATION
- (ii) NON RENEWABLE AND RENEWABLE SURFACE AND SUB-SURFACE RESOURCE DEVELOPMENT
- (iii) SOPHISTICATED WATERSHED MANAGEMENT (POWER, IRRIGATION FLOOD CONTROL)
- (iv) "WILDERNESS" TYPE ENVIRONMENTAL CONSERVATION AND PRESERVATION

1.4 In establishing PLANNING proposals for this area it becomes obvious that we have gone beyond the question of feasibility. Resource potential is more, or less, explicit and the major decision before us seems to be one of whether to EXPLOIT or PRESERVE these resources. In making this decision several factors have to be analysed:

- (i) Are we planning for ECONOMY or AMENITY?
- (ii) Do we advocate one category of land use to the exclusion of all others (e.g. PRESERVATION ONLY or RECREATION ONLY etc.), or do we attempt to minimize land use conflicts and advocate a multiple use policy?
- (iii) Which type of policy will achieve most benefit for Albertans? Are the Eastern Slopes to be of benefit to all, or only to a select few who wish to exclude all forms of public intrusion or development.
- (iv) Can we determine the future demands of Albertans with regard to rapidly increasing urbanized population trends (EDMONTON, CALGARY), increased real incomes, increased mobility and increased leisure time?

All these factors combine to make increasing demands on leisure outlets and recreational space, now. It is only reasonable to expect that these demands will continue to increase and that extra provision will be required nomatter where.



## 2. CONTROLLED DEVELOPMENT OF THE EASTERN SLOPES AND ITS RELEVANCE TO THE EDMONTON REGION

2.1 With regard to the Edmonton Region, the development of the Eastern Slopes would be beneficial in 3 major directions.

- (i) Mineral resource extraction would indirectly provide positive stimuli to continued industrial growth and development in the Edmonton Metropolitan sub-region. In terms of benefit to the residents of this area, this could result in increased employment sources and opportunities, maintenance of high standards of living and a general stimulus to the economy of the area, filtering down through all sectors of commerce and industry. This resource however is finite and may not have significant long range potential.
- (ii) Watershed management would not only provide high potential recreation resources for Edmontonians at head water control locations but would also serve to assure a future supply for power and energy demands in the Edmonton Region. Of less relevance to this Region however, watershed management could be implemented to control flooding problems and provide constant supplies of water for irrigation.
- (iii) Perhaps of greatest relevance to the Edmonton Region is the rich recreational potential which controlled development of the Eastern Slopes would afford.

Presently, the population of the Edmonton Metropolitan area is in excess of 500,000 people. Various estimates by a number of agencies, project that by the year 2000 this population will have doubled to a figure in excess of 1,000,000. Therefore, in the short span of 25

years an additional 500,000 people will be making increased demands on and for recreation and leisure facilities, from Edmonton alone. Summed up with the growth of Calgary and the smaller urban communities within the Province, the problem of coping with an increasing and increasingly leisure orientated population can or should be seen to be of major concern.

- 2.2 Basically, the effect of any development of the Eastern Slopes will exert its greatest influence on the two major Provincial growth poles, Edmonton and Calgary. Both would benefit directly or indirectly from a multiple land use policy, specifically one incorporating recreational resource development.
- 2.3 In terms of access to existing major recreation/tourist areas, that is, Jasper and Banff National Parks, Edmonton is less well served than Calgary. Comparative access time and distance breakdowns for these two major centres are as follows:

<u>City</u>	<u>Park</u>	<u>Distance</u>	<u>Accessibility Level</u>	<u>Time</u>	<u>Cost</u>
Calgary (403,320) 71 census	Banff	81 mls	H'way 1A + Trans-Canada (4 lane to Park entrance)	1 1/2-2 hrs	\$2.75 + ("premium" @ 55¢ p.g.)
Edmonton (438,150)	Jasper	230 mls	H'way 16 Yellowhead (2 way after first 30 mls)	4-5 hrs	\$8.00 +

The above simple statistics alone, indicate the relative disadvantages of Edmonton in terms of access and costs.

2.4 Despite this disparity, a "Sample Study" of the "Recreation Travel Patterns of Edmontonians", 1966<sup>1</sup> indicated that Jasper is the major recreation centre for Edmontonians, for weekend trips, followed by Banff.

2.5 Bureau of Statistics data on the total number of tourists using the Parks annually, is as follows;

	Jasper	Banff
1972	1,491,431	2,483,526
1971	1,365,604	2,465,856
1970	1,285,000	2,297,275

These figures although general, indicate an increase in usage by almost 500,000 visits between 1970 and 1972, and that this increase is spread evenly between the two Parks although Banff has the higher total usage. However in terms of per centage increases in usage, Jasper National Park has risen 14% between 1970 - 1972 while Banff has risen 7.5% over the same period.

2.6 While no origin - destination figures are presently available to determine the degree to which Edmontonians use Jasper and Banff respectively, it might be fair to suggest that a large proportion of the increased usage of Jasper could be attributed to residents based in the Edmonton Region.

2.7 Another aspect of these upward trends is that those existing recreation facilities may not be sufficient to meet the demands of an increasing population, both National and Provincial. It may well be that consideration should be given to augmenting existing facilities by opening

up the Eastern Slopes and thereby securing locations for future recreation utilization.

- 2.8 As stated, Edmonton is disadvantaged with regard to direct access to the recreation, leisure and vacation facilities offered in the Rockies. Even more apparent, is the lack of major developed recreation areas within a 150 mile radius (or 3 hour drive) of Edmonton, offering commercial, camping, trailer, accommodation, and active or passive recreation facilities. The nearest major centre offering such facilities is Jasper. Therefore, the choice of recreational locations for Edmonton based residents is limited. Existing recognizable recreation areas such as Elk Island National Park, Miquelon Provincial Park, Lac Ste. Anne, Lake Wabamun and Pigeon Lake are more orientated toward usage by day-trippers or cottagers, all locations falling easily within a 50 mile radius (1 hour drive) of the city.
- 2.9 It is contended therefore that a demand exists not only to upgrade the provision of recreation areas to serve the city on a day trip basis but also a demand to provide new facilities with a 50 - 150 mile radius of the city (3 hour drive) to serve weekend trippers and vacationers. Assuming a 150 mile radius is an acceptable limit for added facility locations, this would plug the gap that exists between the low amenity locally orientated areas and the high amenity, highly attractive National Park centred on Jasper.
- 2.10 Drawn on a Provincial map, this radius would cover an area extending west from Edson, Robb, Nordegg and Rocky Mountain House including the Forestry Trunk Road which links these communities.





- 2.11 Assuming that this area is suitable for a programme of controlled recreational and tourist development, a necessary upgrading of road access would have to be incorporated in an overall development policy. This upgrading of access would effectively reduce travel times to these various locations perhaps even bringing them within range of day trippers.

### 3. CONCLUSIONS

- 3.1 In conclusion and in terms of both economic and amenity planning, the development of the various resources of the Eastern Slopes area, particularly the North Saskatchewan River Basin, would be of direct or indirect benefit to residents of the Edmonton Region, on several counts.
- 3.2 The Principal benefit would be the provision of and access to an enlarged and less "remote" recreational hinterland capable of fulfilling the needs of a rapidly expanding metropolitan population. Secondary benefits might be:
  - (i) The opening up of new resource reserves capable of augmenting the existing and future supply needs of Edmonton based industries.
  - (ii) The creation of new, water based recreational facilities through water-shed management and the tapping of hydro-electric power resources capable of contributing to the needs of existing and future industrialization and expanding urbanization.
- 3.3 However, through discussing all the "pro's and con's" of development, one major concern becomes increasingly prominent, and that is the need for more study. Obviously, conflicts will occur in any land use development proposal, especially in an area like the Eastern Slopes where strong arguments exist for either conservation, or resource development, or a multiple use programme.
- 3.4 Surveys and analyses of the possible likely effects of various alternative strategies should be carried out prior to any planning programme, whether for or against development. Only when these studies have been



completed, in the light of best possible information inputs, and the various "costs" of each alternative have been assessed and weighed against the "benefits", can goals be set and objectives formulated and implemented.

- 3.5 One approach which the Provincial Government might consider in setting up further study, might be to borrow an analogue from landscape architecture and the notion of "ecological determinism" expanded by McHarg (Design with Nature, 1969), as opposed to the concept of "economic determinism", which is slowly being eroded by ecologists and "environmentalists".
- 3.6 From a starting point in landscape architecture, McHarg developed a hypothesis of the failure of planning on the American Continent to cope with urbanization and space needs due partly to its base in economic theory. Economic determinism (in McHarg's view) should be rejected in favour of a planning approach based on an understanding of natural environmental processes which have their own inherent rules and can therefore be classed as deterministic. The approach he advocates is therefore one of Ecological Determinism, an approach which of itself, creates inherent limits for economic growth.
- 3.7 The six elements of this method are of immediate practical value and could be readily incorporated in a future study of the area, given that it is Government sponsored and has the information and expertise resources of key Government agencies. These elements are:
  - (i) An inventory of ecosystems (natural systems) to relate planning and conservation to natural processes.

- (ii) A description of these natural processes e.g. wildlife cycles, energy cycles etc., in terms of their relationship to man's intervention;
- (iii) The identification of limiting factors that affect the balance of ecosystems;
- (iv) The survey and establishment of social values in relation to environment;
- (v) Establishing constraints, and the possibilities of change, related to the natural systems affected by development e.g. forest capacity; wildlife hinterlands etc.
- (vi) Establishing indicators of stability or instability, that is determining the effects of proposals on ecological systems through a process of projections and feedback. This should indicate where breakdowns in the system will occur and which constraints or performance criteria will be required in order to prevent such breakdowns

3.8 The development of a simple work method such as the "compatibility matrix" as evolved by McHarg, is a useful way of establishing the activities and uses which are not only compatible with each other but also compatible with the maintenance of the ecosystems (natural systems) upon which they depend. From an understanding of the inherent rules of the natural resources themselves and the processes affecting them, an ecological approach can be determined.

3.9 A similar approach, related to architecture and urban form, could easily be adapted to comply with the limits of the Eastern Slopes Study. This technique evolved by Christopher Alexander (Notes on the Synthesis of

Form 1966) concentrates on the compatibility, and the achievement of compatibility, between "form" e.g. a motel complex, and "context" e.g. the Eastern Slopes. Again this is a matrix type of analysis involving the identification of "negatives" to indicate residue or potential "positives" as an aid to establishing development guidelines.

- 3.10 Whichever study technique is established, hopefully it will have a strong ecological input and a statement of the costs (to whom) and the benefits (to whom), of the planning programme selected for implementation. Whatever happens, development or no development, there will be a "price" to "pay" and the citizens of the Province should be made aware of the consequences and alternatives, involved.
- 3.11 Should the decision to develop this area on a controlled basis be made, and it seems reasonable to suggest that this will be the case, it is recommended that the planning strategy selected should include provision for constant monitoring of the effects of development and the ability to accommodate any necessary changes, through the analysis of negative feedback.
- 3.12 To conclude, the type of approach currently being employed by the Environment Conservation Authority and the Province, should be further encouraged and adopted in new Provincial projects. In this way, the Province can take positive steps toward establishing guidelines for the overall planning and development of Alberta on a concerted and interrelated basis. Similarly the various planning commissions, while still performing individual roles, as sub-systems within the total Provincial system, could then also contribute inputs leading toward the concept of a systems approach to planning where the sum of the whole is greater than the sum of individual components contributing towards it.

## QUESTIONING BY THE AUTHORITY

DR. TROST:

This watershed basin is the only one without a planning commission overseeing it. There is an improvement district and as a result the major population centre had no direct input to the position statement on the watershed basin. For that reason, of course, we're very pleased to have your statement now.

Nevertheless, wouldn't there be some need for a regular exchange or input from the major population centre to the Yellowhead and Athabasca basins, and even a broader area of the eastern slopes?

MR. GIFFEN:

Yes, I would say this is most important. I have suggested the manner in which this could be done in looking at the overall provincial policy and plan.

DR. TROST:

Do you feel it should be done after the planning has been completed, rather than during the course of the planning?

MR. GIFFEN:

No, I think it should be an ongoing process with the inputs made as the plan is being formulated.

DR. TROST:

How would that come about?

MR. GIFFEN:

On the basis of coordination and cooperation between the provincial departments, possibly through the C&U committee, and also between the regional planning commissions and the provincial planning office. The vehicles are there now in terms of allowing such cooperation.

DR. TROST:

Do you feel they are being used sufficiently?

MR. GIFFEN:

Not as much as they should be.

DR. TROST:

Do the developments of the Edmonton region through the planning commission's efforts and those of the eastern slopes, under the auspices of the improvement district, have direct impacts on each other?

MR. GIFFEN:

Yes, in that the Edmonton area might be said to be the recipient of all the future actions in the eastern slopes, since we are downstream in the North Saskatchewan and Athabasca systems.

DR. TROST:

The distance of Edmonton from recreational facilities, particularly mountain-based recreational facilities, would seem to put the citizens of Edmonton in a different role from those in Calgary in respect of enjoying the mountains. What kind of facility should be established so that the citizens of Edmonton, constituting not a small number, can make adequate use of these mountain areas?

MR. GIFFEN:

It seems to me that the major problem as far as Edmonton is concerned is the time-distance factor. Under a planned development of the eastern slopes there would appear to be a good possibility for the provision of recreational areas much closer than the present national parks. If you are talking in terms of means of getting there I would assume that some type of rapid rail transport might be of merit in cutting down the time-distance factor. Other than that, I think it is a matter of improving road access and trying to shorten the total distance to such recreational areas.

DR. TROST:

When I was in Calgary I could ski from Calgary. I could go out in the morning and come back at night. Here in Edmonton, if I want to go skiing in the mountains, I have to stay in a hotel or motel, and very often there may not be the facilities. So I'm wondering if there is a need for that kind of facility for the population of Edmonton because of its distance.

MR. GIFFEN:

I believe that is very obvious. Many statements have been made on the lack of accommodation facilities in Jasper National Park. That is part of the upgrading of the recreational facilities needed by the citizens of Edmonton. Even with three to four hours travelling time they would still be looking at more than a day's trip. It would be more like a weekend.

DR. TROST:

If there is a shortage of these facilities now, should they be located within Jasper National Park, or outside the park?

MR. GIFFEN:

I don't rightly know. I think this is part of the consideration as to what recreational uses can be made of the eastern slopes. If the deliberations are such that recreational facilities of this nature can be located in areas outside the parks, then both areas should be improved.

DR. TROST:

Is the Edmonton Regional Planning Commission making any projections of this need for its population? I recognize it is outside its area but it is still relevant to its population.

MR. GIFFEN:

We have not made any detailed projections except to assume a population increase. From the information we have, we can foresee another 500,000 people in the next 25 years. This, together with



better living standards, et cetera, would undoubtedly increase the demand.

MR. KINISKY:

You pointed out in your brief that it is necessary to base all your planning upon population predictions. If we are going to base our planning on dubious population predictions it makes our planning rather dubious. What rational projections are being made regarding population increase? Are we to assume that there will be another half million people here?

MR. GIFFEN:

These might be called crystal ball predictions and when we talk about 500,000 we might be talking about 350,000, or 650,000. In terms of the economic possibilities for the Province of Alberta we are looking at a very definite increase in the population in our major growth polls in the province. Both Edmonton and Calgary are in the position now where they generate their own growth. There is no need to encourage them; they are going to do it anyway. Although the forecast is not at all sophisticated, we can be looking at a significant increase in population. The figure of 500,000 is not specific, but it is at least a reasonably good indication based on the economic prospects for Alberta.

MR. KINISKY:

With regard to recreational areas, you realize there is a study being carried on in the Cooking Lake-Hastings Lake moraine area, which, if restored, could be an extremely attractive recreational area. Do you think this is the kind of development necessary to give immediate relief to the recreational problems of this area?

MR. GIFFEN:

If it is feasible to do this with the Cooking Lake moraine area, I think it is necessary for the day user recreationalist in the Edmonton area.

MR. KINISKY:

When we talk about the size of a recreational area to suit the population needs of this city and a reasonable projection in the future, how many square miles of land should be put into a park or a recreational concept?

MR. GIFFEN:

If we are talking in terms of some type of regional park, I think we should be looking at a large enough area to allow it to remain in its natural state and not be overused. It would be less extensively used than some of what you might call the mini-parks within the city with a lot of facilities. I think these should be natural park areas where people go for relaxation, for walking and looking at the trees and the flowers.

MR. KINISKY:

When we speak about regional parks, is there some sort of relationship between the numbers of people in the general population centre and the areas required to take care of their recreational needs? Is it a square mile per thousand people or something like this?

MR. GIFFEN:

The parks and recreation people have a figure of about 10 acres per 1,000 people for all types of parks. But obviously, if you are looking at specific types of regional parks as opposed to municipal parks, et cetera, the size is critical.



966-1

THE ENVIRONMENT CONSERVATION AUTHORITY

EASTERN SLOPE HEARINGS

JUNE 6th 1973

PRESENTED BY:

A. FENNELL

PEGASUS EXPERIMENTAL METALS AND MINING LTD.

P.O. BOX 3866 Edmonton

Alberta, Canada

In this study of the future use of the Eastern Slopes of the Alberta Rocky Mountains, great care should be taken to understand what, if anything, the often-proposed "cost/benefit study" proves or disproves. The question comes to: "At whose or what cost, and to whose or what benefit?"

To refuse the extraction of a mineral on the surface because others may feel it should be left undeveloped so that it may be kept as a shooting preserve for the benefit of a group of people dedicated to the killing of animals not necessarily for food, and quite often just for the trophy head, is very debatable. It is agreed that this brings in money for some and therefore it must go into the cost/benefit sheet. But do the people who advocate non-development ever think that their material well-being, vehicles, guns, ammunition, planes and the time to engage in such activities are often being bought by an adverse "cost/benefit balance" in an area outside their accepted scope of vision?

Because of their material wealth they are able to direct part of their time to non-material pursuits, and yet in other areas of the world less fortunates have to pay an exorbitant price of their time and the degradation of their ecology in order to provide these dubious cost benefits.

Minerals are where they are in the pattern of geology and wishes will not change this. It would be logical to set aside areas where the likelihood of minerals is remote, as wilderness, yet recognizing that not all people have the physical capability of hiking, skiing or canoeing into the remote areas. Perhaps it is the lack of imaginative thinking on the part of the mass transportation companies that leaves the ordinary vehicle the only means of transport notwithstanding that specialized vehicles have been developed for poor road conditions. For example, is it beyond the imagination of the railways to run Dayliner Excursions, leaving the city early morning and returning late evening? Jasper, Coal Branch and Nordegg are some of the foothills entries that could be examined.

If roads are going to be built, then let them be built to the highest engineering standards possible. A well-engineered, high-speed access road with frequent safe turn-offs for rest and viewing is preferable to a dangerously narrow road with tight curves and unpredictable conditions. Driving a car is, and always should be, a full-time occupation, and the lower the standards of engineering and visibility the greater the need for concentration on driving. The notion that it is possible to drive and admire the scenery at the same time can and does have fatal consequences. This does not mean that every road that leads to the beauty that is part of the foothills should be turned into a

speculators' "Coney Island". The road can be multi-purpose, for industry, commerce and recreation; then the economics are improved for all. Underdeveloped side roads of relatively primitive condition duly posted and carrying warnings as to their condition would allow many people who have neither the time, money nor stamina to engage in packhorse trips or hiking to see some of this remote beauty. Surely such people have as much right to enjoy the Alberta foothills as the super-physically fit. A side benefit would give better access for fire control, which is a costly and arduous task for those involved.

The type of economic society that can turn its back on industrial development must, for survival, have other bases to support its economy, e.g. export of technology, finance or other invisible exports. Tourism, as attractive as it may seem, can become just a mutual trade-off. This leaves only one recourse, that is to return to an individual pastoral economy where each individual supplies his own needs according to his own desires or wants. As we know, being interlocked on a national, continental and international basis, this is a purely hypothetical argument unless we are prepared to sacrifice almost all the material assets that we have in our type of economy.

The basis for mineral extraction, be it gravel for concrete, clay for bricks or gypsum for wallboard, cannot be debated until we have a change in technology. Power generation for electric toothbrushes

and electric erasers is in its own way responsible for the extraction of coking coal to make the steel to build the power station to generate the power to operate the electric eraser that is used to erase the mistakes made on paper that was made from the chopping down of trees in the foothills.

Of course we could reverse this. Do not cut down the tree, then there would be no paper, no need for the electric eraser, no need for the electric power, no need for thermal coal and no need for the coking coal and, last but not least, no briefs or reports.

People are not thinking out what an integral part they all play in this intricate cycle. To deny industrial development in one area only means that it will shift to another area, unless public demands are reduced to zero. It is only when problems enter our own particular sphere, be it fishing, forestry, mining, water usage, land usage, waste disposal, air degradation or intolerable noise levels, can we start to comprehend what price is being paid by everyone whether they are able to enjoy this dubious high standard of living or not.

The solutions are not necessarily in laws or acts of Parliament or more and more regulations, as there will always be balance and counterbalance. The more laws that are made, the more lawyers who find employment in challenging them; the more laws that are challenged, the more laws that are made to close the loopholes.

Humans being what they are, all have their own ideas of what is best for them and sometimes without prior consultation, what is best for everyone else. Solutions to the diverse problems of industry, recreation and the economy will always have to be decided by the fine art of diplomacy and the delicate balance of compromise and individual responsibility, knowing full well that an ideal state is not ours to achieve, but that we can strive to do our best and to aim as high as possible. This may mean that we have to be more concerned with what is right, and not who is right, and this may take a veritable Solomon to adjudicate.

As a closing thought, think for just a moment of the cost/benefit of that chrome on your car bumper to the Rhodesian native and his ecology, the asbestos that insulates your furnace to the inhabitant of Thetford Mines, the tin to the Malayan, the teak garden furniture to the Burmese. Could the question of keeping the foothills virginal and in a pristine state form a mixed metaphor, "Please can I have my cake and eat yours too?"

Respectfully Submitted



Allen Fennell

Project Co-ordinator Project A/24

<sup>a</sup>  
Persus Experimental Metals and Mining Ltd.

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

You advocate considerable entry into the foothills regions. You mention this is necessary because everybody doesn't have the physical abilities. We are also told by students of the wilderness area that the problem of too much entry is getting to be an extremely serious one, and that if we continue doing this, we won't have a wilderness left at all. Where do we draw the line and decide when entry is all going to stop?

MR. FENNELL:

One of the things that's been missed here is the rail line now running to Nordegg. With imagination this could be used to get people into these areas. I was in the Cline River and Coral Creek areas when you couldn't even move a car through them, so I'm fully aware of all the territory. But all people, including those with young children, do have the right to access to the foothills, as well as those who can walk, hike and bicycle into them.

MR. KINISKY:

How do we get them to take the train to a place like Nordegg to disperse them? We can't even get them to take the bus downtown.

MR. FENNELL:

I think it can be done with trains. For example, if a train were to leave at 6 a.m. on a Sunday morning, it would put you in Jasper on a high-speed line by 10 or 10:30. That would give you the whole day and you wouldn't have to leave until 8 or 9 o'clock at night. That would relieve traffic on the roads and the accident-proneness of driving. It's a section that just hasn't been approached. I was surprised myself.

I was at the coal hearings in Calgary and I missed my plane so I just walked down to the Greyhound bus station. I was in Edmonton three hours later and I didn't have the bother of driving.

MR. KINISKY:

You talk about the location of the resources of the foothills being just a geological accident. Should we develop on the basis of geological accident, or should we be governed by factors other than the location of the resource?

MR. FENNELL:

If you want to make concrete, you need limestone. If the limestone is in the foothills you either take it from there, or you can import it from Quebec. But my point is, when you deny development in one area, if you want to keep your standard of living you only move it to another area. So far the solution has been, as long as I don't see it I'm not worried about it. The problem is - and I will talk about limestone because it is one of our major problems - that although we would like to take it closer to Edmonton, it is 8,000 feet down. At Nordegg and Cadomin it's on the surface. So we cannot choose where we get the limestone; it's chosen for us.



DR. TROST:

A major point in your presentation, which I think is good, is that we can't be too parochial when we're thinking of the eastern slopes. We need things from other parts of the world, and maybe other parts of the world need something from our eastern slopes. We must have a broader view than we sometimes have.

The Alberta Wilderness Association's proposal for the Athabasca River Basin is contained in the written record of the hearing held in Hinton.

K. Crockett submitted the Mount Cline Leisure Resort Proposal for the second time. The proposal was originally presented in Red Deer and may be found in the written record of that hearing.

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

When we look at the population forecasts upon which much of this is predicated, we're talking about populations doubling in 30 years. What are the sources of these predictions, and how much confidence do you have in their reliability?

MR. CROCKETT:

We checked that and the sources are valid.

MR. KINISKY:

The population problem is my concern because there has been so much disparity in what is being predicted and what is really happening.

MR. CROCKETT:

There is a publication called Canada Facts, and any information was obtained from that source.

MR. KINISKY:

What is the approximate date of that publication?

MR. CROCKETT:

It is put out every year.

MR. DOWLING:

The premise on which you have put forward this concept is that it would be of great benefit to Albertans. Do Albertans want to see a tourist influx into their province, such as might accompany a project of such magnitude as this?

MR. CROCKETT:

Only time will tell. We can't stop the clock. You may recall that people were turned away from Waterton National Park over this past weekend because it was claimed to be too full. They are talking seriously about limiting the people going into Banff and Jasper for similar reasons.

MR. DOWLING:

Do Albertans want this? What is there that you or your group can do to try to influence their thinking so they will come to an acceptance of the concept?

MR. CROCKETT:

This is something that has to gain public support and this is why we feel it must gain government support. It's the big factor in this whole scheme. This is an opportunity for Alberta as a whole to forge ahead.

MR. DOWLING:

You have indicated that there is some flexibility with regard to the choice of site. A site was proposed but you also stated that it could be some place else. Is it necessary that it be in the eastern slopes?

MR. CROCKETT:

First of all, "a" site was proposed, not "the" site. It was not specified. It was felt that a feasibility study could best determine where it should be. Where better than in or near the mountains for a tourist resort and convention complex?

MR. DOWLING:

Would your group have the same enthusiasm for the proposal if it were located in or close to an urban centre?

MR. CROCKETT:

No, the cost of putting such a scheme forward would probably be ten times as great if it were near a large centre, because of land values and other restricting factors.

MR. DOWLING:

I believe you suggested that the provincial government carry out a study. Would you expect the government at the same time to consider not only the cost of construction of this proposal or a system of structures and recreational facilities originating from this concept, but also to take into account the public expenditures that would be necessary with respect to roads, airports and other services?

MR. CROCKETT:

Schools and hospitals?

MR. DOWLING:

Yes, would this be part of the study?

MR. CROCKETT:

Either it is workable or it's not and there is only one way to find out about it.

DR. TROST:

It seems to me that you are trying to describe another way of using the resources of the eastern slopes in order to produce public benefit and revenue to the province?

MR. CROCKETT:

That is correct.

DR. TROST:

And you wish only to describe this alternate way of developing this recreational tourist convention complex with the educational use of facilities, with sufficient clarity to enable the government to decide whether or not it should be looked at in depth. Am I correct?

MR. CROCKETT:

Yes.

DR. TROST:

And therefore you are bringing this concept forward, not necessarily with the view to being a prime participant in it yourselves, but to encourage the government to give serious consideration to this other way of using the eastern slopes?

MR. CROCKETT:

That is right.

DR. TROST:

This is a proposal, therefore, for a study by the government, but with joint government-private participation in the study stage.

MR. CROCKETT:

Right, in helping to draw up a master plan for the whole eastern slopes region.

DR. TROST:

You suggest that if this alternate way of using the eastern slopes through a tourist-related industry is considered worth looking into, and if it then goes into a development stage, this stage should also be under joint government-private auspices.

MR. CROCKETT:

That is right.

DR. TROST:

With the federal government, the provincial government and local governments all possibly playing a part?

MR. CROCKETT:

They would have to. It's a team effort.

DR. TROST:

And with the private components also possibly playing a part, either through direct participation of a major investor or through share participation of small investors?

MR. CROCKETT:

That is right. There would be stores, restaurants and sporting facilities in the area and the public could take part by developing this part of it under government guidance.

DR. TROST:

So you are not really making a proposal that the developmental stage need necessarily involve you and your associates in a specified fashion.

MR. CROCKETT:

This is an altruistic plan. There is no hidden wish for us to get a piece of the action.

DR. TROST:

I wanted to bring that out clearly because I think initially there was some misconception of the role the people who propose the plan wish to play in its final implementation. It is really a proposal for a feasibility study of another way of using the resources of the eastern slopes, rather than a proposal to use them for any particular purpose.

What kinds of facilities and functions do you envisage for this complex? The four major uses you suggest are sport, convention, recreation and education on a winter and summer basis. What do you now have in mind so we can decide whether a feasibility study is a proper step forward?

MR. CROCKETT:

Please don't hold me down to details because this is just a dream.

Whatever sports are practicable in the area decided upon should be developed and put into use all at once, as at Sun Valley. It is important that the common man be able to use these facilities. It should not be a country club for a select few. Therefore, provision would have to be made for trailer camps, campsites, hiking, fishing and all the outdoor recreations that we Albertans are so proud to have. It may be that as a centre for sport Canada may wish to ask for the Olympic Games. This would be a natural tie-in. There would be an awful lot of work involved, I grant you, but don't rule it out.

In connection with education, there are many, many seminars and week-long conferences held by teachers, trustees, students and others. They do not have enough places to go.

What is envisaged here is a composite convention-type construction where you could have one very large convention, hold two or three at the same time, or have one big one and three or four small ones. You could diversify your facilities so that you could meet the needs as they arise and not be stuck with one large building that may be standing empty.

The Banff School of Fine Arts finds itself taxed to the hilt at the present time and I'm sure they would welcome any extra facilities that they wouldn't have to put up themselves.

DR. TROST:

You think they are cramped in the park. Could you do the expansion that they would otherwise have done?

MR. CROCKETT:

Right. The Banff Centre is going all year round; it's just humming. It finds it very difficult to accommodate students during the summertime, which is the tourist season.

For every 1,000 rooms built for a hotel complex, 850 jobs are created. So when you are talking about convention, tourist, recreation or sports facilities, you are talking about permanent



employment for a large number of people. The time will soon come when we will be searching for some place where people can make a living.

There are three world powers, each one of which could produce all the world's requirements of manufactured goods, namely, Japan, the United States and the European Common Market. Any one of those could supply the entire world now. You can see its effect on Canada. Plants are being gradually closed down left, right and centre. As I said before, we're becoming hevers of wood and drawers of water. We've got to find something in this country to fill the growing void.

DR. TROST:

Do you feel that people outside Alberta and Canada would come to such a facility in the eastern slopes in numbers sufficient to make it a worth-while venture?

MR. CROCKETT:

I can't give you dollars and cents or numbers. May I just point out that Kiwanis International held its convention in Montreal in June. It was attended by over 20,000 people. Rotary International held its international convention in Geneva. Over 15,000 people attended and they had no central facilities to book them. They were booked in towns, cities and villages throughout France, Italy and Switzerland and delegates had to travel as long as two and one-half hours each way daily, which was extremely inconvenient. Chicago is a great convention city but they have to book their delegates in hotels within a 15 mile radius. The demand is there.

DR. TROST:

Do you feel that other proposals for the eastern slopes such as The Odyssey or Assiniboia are competitive with yours, or are they included within the feasibility study you are proposing?

MR. CROCKETT:

They are included within this study and could well be integrated into a master plan within a small area. There is no conflict.

DR. TROST:

If the feasibility study were to go forward and a development were to result, should control be vested in the government, the private sector, or possibly a Crown corporation?

MR. CROCKETT:

Certainly it should be vested in the government to a large extent, whether by itself or by this group you've mentioned, because this is large enough to need some master control. I can't see it operating under private enterprise completely. There are too many conflicting interests to be protected.

DR. TROST:

Could this concept include a mixture of government and private controls so that many separate enterprises would be integrated into one related operation?

MR. CROCKETT:

Right.

## DISCUSSION ON MOUNT CLINE LEISURE RESORT PROPOSAL

MR. KURE:

E. Kure.

I have had the pleasure of discussing with Mr. Gardener - who I understand dreamt this concept up - one problem which prevents me from completely accepting the concept. I find it quite clear that there are two reasons why a mountain region would be preferable for a concept of this size and magnitude. One is the free advertising. The mountain becomes a calling card for such a place, and the cost of advertising is lessened.

The other reason is tax relief, escape from the tax burden associated with similar facilities located around an urban centre. This is understandable provided we assume the land on which the development is located is less valuable than that surrounding our cities. This is an important question. Throughout these hearings the people of Alberta have emphasized that they do not feel this land is less valuable. In time it may be considered more valuable.

The size of the commitment is no problem to me. I recall hearing someone associated with this concept say that the people who go to conventions will go where the convention is. On that basis I would assume that a facility of this nature would be a tremendous boon to a city like Red Deer, where we might drain off the expansion burden that seems to be associated with Calgary and Edmonton and then cater to a very large international clientele. I really believe that in these terms the concept might be accepted by the people of Alberta.

My only other concern is what might occur if this concept were located in the Mount Cline area or in the corridor within the mountain region. It would completely replace the present user structure. I believe it has been the unanimous opinion of the public at these hearings that the present user facility should be preserved. I speak for the Alberta Fish and Game Association, and I believe that the 250,000 people who hunt and fish in this province every year are an important group and probably only part of a larger group that enjoys the same things.

MR. SWANSON:

Bob Swanson.

I can understand people going to Geneva or Banff or some of our other famous resorts. But it seems to me that if a facility like this were not located within the old confines of the forest reserves between Highways No. 1 and No. 16, it would become a terminal resort rather than a resort on the way to other facilities. Would it be feasible to build this resort at, say, Grande Cache where we have a community in trouble because of its problem with one resource base? Would you consider a resort like this as part of a planned area development where the fish and wildlife industry, lodges, skiing and so forth could be combined with a limited amount of timber and pulp production and perhaps even coal mining? Would Grande Cache be a suitable place?

MR. PEEL:

Gordon Peel.

A couple of items in this concept disturb me. In fact it disturbs me when any industry moves into the forest reserves. All of them want to move into the forest reserves to mine coal or develop tourist facilities because of the inexpensive land. That inexpensive land is Crown land, our land, and developers try to get around it by having government participation in the investment and return. But I'd like to make the point that Crown land, because it is ours, should not be considered inexpensive.

Another point that should be considered is, what would it cost the individual to visit this type of complex? I know that in most hotel complexes it takes one employee to serve two guests. With wages the way they are today, this type of facility might be a little beyond the reach of our young people who use the Banff School of Fine Arts and so forth. The cost per day of staying in a facility of this nature might get a little high.

Furthermore, how much expansion is going to be required from year to year until we've trampled the area and what we came to see is no longer there? This will happen in any large complex. In the cities we have concrete jungles. This is what we're trying to get away from, so let's not take it out there. I don't object to the complex outside the forest reserves, but I definitely do inside the forest reserves.

MR. LUMSDEN:

Richard Lumsden, Alberta Department of Agriculture. I have also worked with Al Oeming for 18 years at the Alberta Game Farm.

Having gone through the White Goat and Siffleur Wilderness parks, and talked to Californians and other people from the United States, I know that a Disneyland experience is generally avoided. It has an appeal for the international jet set who travel and temporarily stay at expensive hotels. But basically what it does is cut a huge swath on either side of a four lane highway. You have a huge complex where wall to wall people move out in perhaps a 10 mile radius to hike, camp and fish. The trend I've seen emerging among Europeans who travel is a preference for a wilderness setting, for instance a small cabin or a small centre.

I would just reinforce the idea of ascertaining people's views on costs and benefits, particularly those who are affected, through an opinion survey. If the site proposal is switched to Grande Cache you should find out how people would be affected in that area. If it's in the Banff corridor around the Canmore-Spray Lakes area you should get a consensus of opinion on the costs and benefits there. Weigh value systems. Where do people stand? Where do they place their values? Is it on money? Is it on international growth and rapid growth? This is what the Environment Conservation Authority is determining.

MR. BRODA:

I. Broda, Alberta Department of Agriculture.

You've given us a very Drapeau-like outline of the financing. Could you go into more detail on the financing, especially what you mean by the phrase "predominantly Canadian"?

I also question conventions as a social institution for the average Albertan compared with recreation. Do you really expect the average Albertan to compete with somebody who is sent to a convention by a business that can finance convention expenses and write them off from its taxes?

MR. CROCKETT:

My suggestion of having it outside urban centres where the land is cheaper has been misinterpreted. I didn't mean that this would be a good chance for somebody to make a fast buck. But if you tried to build a large complex in Edmonton, think of the tremendous cost of acquiring the land alone. Here the land is government-owned and it would be leased out to any developers at a reasonable cost. It would not be given to them free.

Building a new complex somewhere seems to be an unheard of suggestion. That's not necessarily so. Where did Las Vegas start? You can take example after example. In Palm Springs there was nothing, and somebody with vision came along and built a resort. Now we think nothing of it, but at the time people thought he was crazy.

Financing this is something big. This is why somebody like government has to step in and see whether it will work. One corporation can't do it. It's bigger than all of us.

Finally, we can't turn the whole province into a game preserve or wilderness area. I don't wish to belittle them, but the people who go hiking in the mountains off the beaten trails are very much in the minority. We must think of the old people and the handicapped. There's room for everybody.

MR. GARDENER:

Ted Gardener.

In regard to financing, I would like to state that I admire Mr. Drapeau. Mr. Drapeau was considering the benefit of the citizens of Montreal. He accomplished more for public relations and understanding throughout the world than any other Canadian. He did not hurt anything and he built a beautiful accommodation. There were many comments made on Mayor Drapeau's proposals. Western Canadians should ask why the federal government cannot help promote solid, workable ideas for our benefit? Compared with eastern Canada, I don't think western Canada has had the proper support from the federal government. Maybe it's because we didn't ask for it.

We are not promoting the comparison with Las Vegas because of gambling, nor are we trying to do anything bad for the morale of the province. In fact, we admire the spirit of youth. We would like them to be with us, to share, plan and participate. I feel that we are not on an equal footing with athletes of other nations. The fellow who won the ski jump event in Sapporo practised in Alaska because there was not enough snow in Canada. Our young people will come to us and say they want to practise on a field of Olympic standards so they can be on an equal footing with athletes in other countries. These are athletes and they deserve our support.

My proudest moment as a Canadian came when Canada promoted hockey throughout the world. As an Edmontonian, the proudest moment of my life was to see competitors from all over the world trying to beat Percy Page's Commercial Grads. All these things were developed in Edmonton, in our own community.

But nowadays the number one priority in this country is creating jobs with a minimum amount of pollution. Let's compare the industry we are proposing with the other industries, for example the pop industry. Every job the pop industry creates costs \$133,000. AGT also works on \$133,000 for each job it creates. But the industry to which we now refer would create a job for every \$21,000.



We have a lot of institutions, NAIT and SAIT for example. They teach people certain skills, but we don't have any place to put them. These are the people who will benefit from a project like ours. We're not against the fellow who likes to camp, swim or canoe. We would like to provide proper accommodation for those people - Albertans, Canadians or anybody who would like to come to this country. We would like to create something unique and beautiful that would make us proud.

We are not an extractive industry. We do not dig unsightly holes and we don't intend to tear mountains down or spoil the scenery. In fact we would like to beautify the countryside by using Canadian materials, labour and expertise. We have engineers and architects. Give them the chance to create something beautiful according to what the government and Albertans would like. We cannot do anything without the consent of Albertans. But we do feel that it is our duty to provide them with an idea so that the whole community, not only Alberta but all of Canada, can benefit by these undertakings.

DEVELOPMENT PROPOSALS  
FOR THE  
EASTERN SLOPES OF THE  
CANADIAN ROCKIES  
ALBERTA CANADA

Includes hostel proposals for  
the Athabasca River Basin and  
"General Submission" submitted  
by the Alberta Youth Hostels  
Council.

Presented by: G. Rathbone



## ALBERTA YOUTH HOSTELS COUNCIL

June, 1973

CYHA MOUNTAIN REGION  
455 - 12TH STREET N.W., CALGARY  
PHONE 283-5551

CYHA NORTH WEST REGION  
10922 - 88TH AVENUE, EDMONTON  
PHONE 489-3089

977-2



# REFERENCE

- City.....
- Town.....
- Village.....
- Highway.....
- Provincial Park Boundary.....
- National Park Boundary.....
- Rocky Mountain Forest Reserve Boundary.....

- Proposed Development.....
- Proposed Development (Approx.).....
- Proposed Development Area.....
- Proposed Wilderness Area.....

Youth Hostel (Early Development) ▲  
 Youth Hostel (Later Development) △

NORTH SASKATCHEWAN  
 RIVER BASIN

SCALE 1 INCH TO 12 MILES APPROXIMATELY

ATHABASCA RIVER BASIN

MAJOR DEVELOPMENT PROPOSALS



CADOMIN YOUTH HOSTEL  
DEVELOPMENT PROPOSAL

The Alberta Youth Hostels Council proposes that the various levels of government in the Province of Alberta undertake to give a grant to the Canadian Youth Hostels Association, North West Region of 2 or more acres of land in the Edson Forest Reserve.

The land is in the area known as the Hamlet of Cadomin and is described as - part of the Northwest 1/4 of Section 31, Twp. 46, Rge. 23, W5M that lies west of the highway and southwest of the Old Luscar Road.

This land will be used to accommodate a youth hostel and will be subject to the types of regulations imposed to ensure the safety and good health of all who use the facility. A land area of this size is requested:

- 1) to allow for location changes in any adjacent roads and road allowances,
- 2) to allow the hostel to be located adjacent to a temporary and emergency potable supply of water,
- 3) to allow the hostel to be well away from any traffic road.

977-4

HOSTEL SITE



CADOMIN YOUTH HOSTEL

LATER DEVELOPMENT

FAIRFAX LAKE

GRAVE FLATS

MCLEOD RIVER

MEDICINE LODGE

HINTON

BRULE

ROCK LAKE

MOBERLY LAKE

Eight Localities

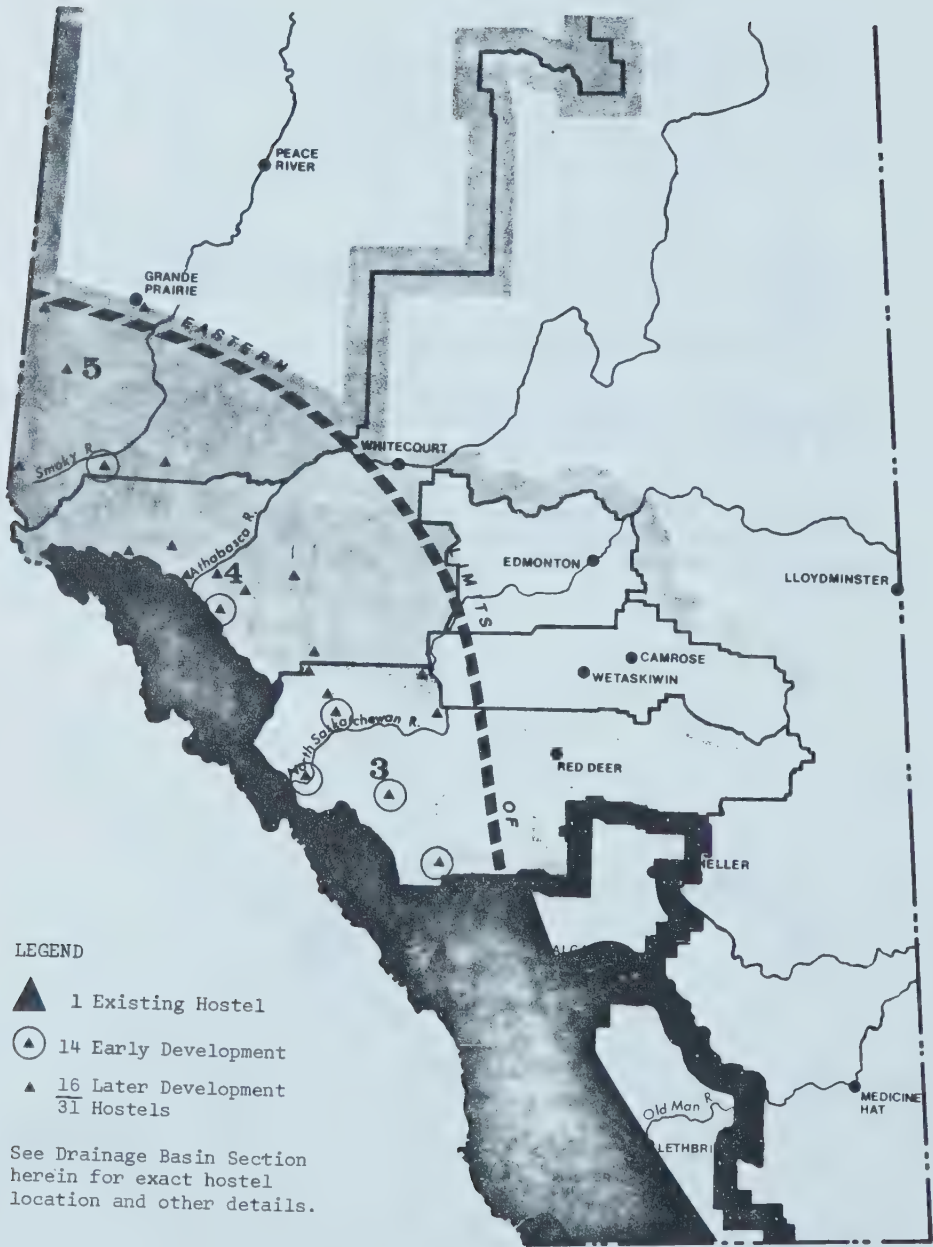
PROPOSAL TO DEDICATE EACH LOCATION FOR LATER HOSTEL DEVELOPMENT

Localities are indicated on the map on Page 41.

Detailed development proposals are NOT included at this time for hostels in these localities because we do NOT see early demand for their use (i.e. within five years).

We do propose, however, that we consider development of a hostel in each of these localities sometime after a five-year interval, and to that end, we further propose that the Government of Alberta now dedicate 2 or more acres in each locality as a site for later hostel development.

PROPOSED YOUTH HOSTEL CHAIN  
EASTERN SLOPES



WHAT IS A PERMANENT YOUTH HOSTEL?

A youth hostel is a building which affords shelter to young people exploring their own or other countries of the world. It also provides a meeting place in which young people of different social backgrounds, opinion and nationalities can meet and exchange ideas.

A youth hostel is supervised by a resident houseparent, and provides separate accommodation for males, females, and families; washrooms, cooking facilities and a recreation room for relaxation.

The overnight fee varies from 75¢ to \$2.00, depending on the facilities offered. In the type of accommodation proposed for the Eastern Slopes, the fee would be approximately \$1.00.

International Youth Hostelling has developed basic rules and customs founded on thoughtful consideration of others. Rules of conduct will find approval with leaders of church, school, boy scout and girl guide groups using the facilities under a group membership. No alcohol or drugs are permitted in a youth hostel and no smoking is allowed in the dormitories.

Youth hostels are principally designed as simple overnight accommodation and are not intended as cheap hotels. Members are asked to keep their dormitories clean and tidy. The houseparent allocates various duties to a person on the morning following his stay and prior to his leaving. The hostel should be closed from 9:00 a.m. to 5:00 p.m., thus allowing the houseparent to do various tasks around the hostel. The traveller is encouraged to go out into the natural environment and to participate in assorted activities, rather than staying around the hostel. The maximum staying length of time at the hostel is usually three days, but this can be extended at the discretion of the houseparent.

THE NEED FOR A PERMANENT YOUTH HOSTEL  
IN THE EASTERN SLOPES

---

Europe, Japan, North Africa and to an increasing extent, North America, are providing youth hostels for the use of young travellers that offer inexpensive accommodation under firm but friendly supervision. In a wilderness setting like the Eastern Slopes they serve as a base for school or club groups, individual travellers, and young visitors from other countries who want to see and explore the mountains, forests, lakes and other natural features of the area. In the foreseeable future the Eastern Slopes will become a major recreation area, not only for Albertans but for North America and even the world.

It is essential that the Eastern Slopes are developed to the greatest advantage of all and that a comprehensive and just development policy is formulated in the immediate future to provide fair and adequate legislation to guide and control development in the area. The Alberta Youth Hostels Council goes on record as realizing that development in the area is certain as the population increases and that the demand in the Eastern Slope resources, both renewable and nonrenewable, is inevitable. The A.Y.H.C. further states that it is not opposed to resource extraction but insists that a comprehensive and complete inventory of resources be undertaken; that a "master plan" for resource extraction be prepared and debated at public hearings; and that wilderness and recreation areas of sufficient size be set aside to be inviolate for eternity. It goes without saying that all mining operations should be carefully supervised to ensure minimal impact on the surroundings and cleanup operations are rigidly enforced by a bond deposit system. Logging, grazing and similar renewable demands need to be carefully zoned and controlled to ensure continuous yield and minimal impact. Standards should be set for various roads, clearings, right-of-ways, structures, signs and similar cultural intrusions. With the careful analysis of resource inventories, public opinion, recreation and resource demand it should be within the capabilities of experts in many fields in the Province to prepare a comprehensive and equitable plan for the Eastern Slopes.

It is a known fact that the Forestry Trunk Road will be completely paved in the next decade and this will provide, particularly in the portion south of the Trans Canada Highway, an alternate to the National Parks as a year around recreation area. There will be an increasing number of young people going to the Eastern Slopes to participate in various activities, and, as with the National Parks, decent low cost overnight accommodation can become an insurmountable problem to them unless the authorities take a sympathetic view of the youth hostel concept. The A.Y.H.C. proposes development of a chain of youth hostels from West Castle to Grande Cache spaced for cycling considerations (25-40 miles apart) and planned to accommodate groups of classroom size as well as individuals. (See Page 1)

The A.Y.H.C. believes that by constructing a chain of youth hostels in the Eastern Slopes as the roads are improved, and by initiating a program of hostel based educational and recreational activities, that these resources of the Eastern Slopes will become available to the widest range of young people at minimal cost, and by the unique multiple use factor built into a youth hostel, with the least possible cultural impact on the land.

One major problem that inhibits the A.Y.H.C. from hostel construction in this area is land acquisition. Therefore, the A.Y.H.C. requests from the authorities having jurisdiction over the lands in the Eastern Slopes, suitable sites for youth hostels at the locations indicated on Page 1 on either a freehold or leasehold basis. The sites should be a minimum of 2 acres in area.



WHO WILL USE THE HOSTEL

Listed are the individuals and organizations in Alberta that will make use of the hostel accommodation. It must be noted that this is year around use and obviously is not restricted to any particular group or agency. It is truly multiple use.

1) Canadian Youth Hostels Association Members:

The C.Y.H.A. organizes many outdoor activities such as cross-country skiing, snowshoeing, mountain climbing, hiking, canoeing and cycling. These hostels would provide locations in the heart of the type of environment in which many or all of these activities could take place.

2) Skiers:

Some of these hostels (West Castle and Ribbon Creek) will be located near ski developments and it is possible that other ski areas will be developed in the Eastern Slopes. Generally low cost accommodation is scarce at these developments and a hostel in the area can provide this service. Cross Country skiing does not need the facilities of downhill skiers and can be undertaken from any of the hostels in the Eastern Slopes. The growing popularity of this sport assures a constant useage of hostel facilities by groups, individuals and families.

3) Schools, Colleges and Universities:

A chain of hostels would provide a much needed facility for outdoor education in a wilderness setting, as well as accommodation for school affiliated recreation clubs. Education group use of the two larger youth hostels in Southern Alberta (Ribbon Creek and Mt. Eisenhower) has become so great that accommodation to these groups has to be rationed. It is apparent that the proposed youth hostel chain would be a desirable asset to the Alberta education system.

4) Church Groups:

Many church groups undertake outdoor activities year around and have found youth hostels to be ideal locations to centre their activities.

5) Uninvolved Young People:

This group includes young people who are not involved with any group or agency. There are many of these young persons and we feel that they need the direction to develop their potential in terms of leadership and character. Hopefully outdoor activities could provide some of this direction.

6) Groups and Agencies:

There are many groups and agencies such as the Y.M.C.A., Y.W.C.A., Boy Scouts, Girl Guides, Junior Forest Wardens, 4-H, etc., who use our present facilities and an expanded chain along the Eastern Slopes would be to their advantage and, if present trends are any indication, the proposed hostel will be well used by them.

OPERATION OF THE PROPOSED YOUTH HOSTEL

An Eastern Slope Youth Hostel will be open to everyone, irrespective of religion, race or creed. Priority will be given to visitors under the age of 18 until 6:30 p.m.. Persons staying at the hostel will require a C.Y.H.A. or an I.Y.H.F. membership card, belong to a group or agency that has an affiliated membership, or pay \$1.00 for a guest pass.

An overnight fee of \$1.00 will be charged. Every person staying at the hostel must use a sheet sleeping bag or a regular sleeping bag. Blankets are supplied and the visitor can rent a sheet sleeping bag from the hostel for a nominal fee to cover laundry charges. There will be self-cooking facilities and utensils but no meals will be provided.

In normal practice the hostel would be closed from 9:00 a.m. to 5:00 p.m.. Lights out would be 11:00 p.m.. A portion of the hostel could remain open during the day in periods of cold weather or on extremely rainy days.

There will be a houseparent who will live on the premises in a provided suite and the Canadian Youth Hostels Association recommends that a mature married couple would be the most suitable for this type of work. The houseparent will have the right to refuse accommodation to anyone who is obviously under the influence of alcohol or drugs. The hostel will cater to normal, reliable people who are travelling or participating in some activity in the area. The hostel will provide information about activities of interest and interesting places in the area. In many cases leaders from the C.Y.H.A. will organize and promote these activities.

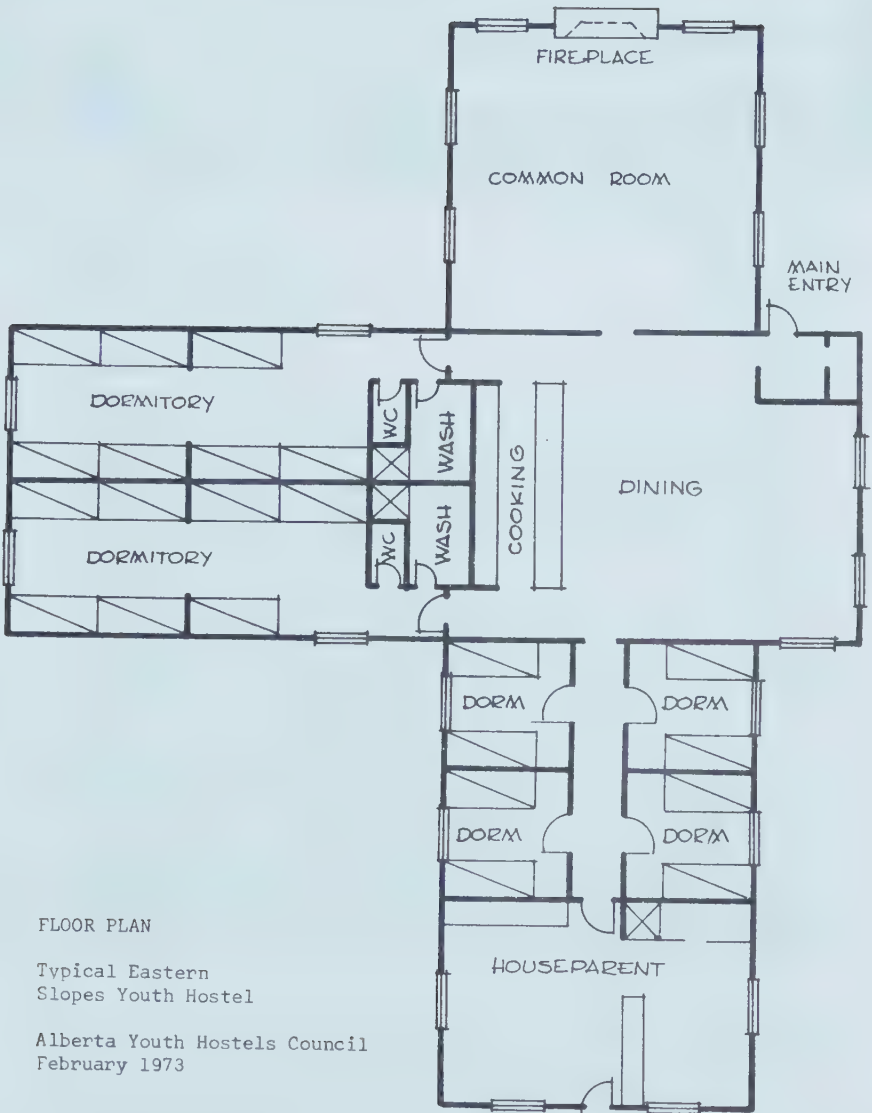
STRUCTURE OF THE PROPOSED YOUTH HOSTEL

The proposed youth hostel development at all sites would resemble the present structure owned by the Canadian Youth Hostels Association at Ribbon Creek in the Kananaskis Valley, west of Calgary. It would be about 15% greater in floor area (3,024 sq. ft.), but would have no large basement development other than a service and storage area. This plan has evolved from 10 years of operating experience and has proven to provide adequately for all types of useage.

It would be constructed in the squared cedar log construction like Ribbon Creek, a system that the C.Y.H.A. has found to be asthetically appealing for a hostel building as well as warm and durable.  
(See Photo Page 10)

The configuration and capacity (44 beds) would be similar to the Ribbon Creek Youth Hostel. This would take form of a lopsided tee (see Page 10) and provide a dining room/kitchen, a large common room suitable for classroom instruction, and dormitory and individual accommodation. There would be a year around resident houseparent on the site. The operation would be identical to Ribbon Creek.

The hostel could be constructed in a number of ways and generally the Association tries to have some part of the building constructed voluntarily by its members. In the case of a cedar log type building assembly is the ideal area to have an input of unskilled labour. The rest of the construction is done by local tradesmen. Construction of one of these units would employ approximately 2 skilled and 2 semi-skilled men for 2-4 months (168-336 man days) depending on the amount of services provided (see Page 9). There would be a large labour input into the prefabrication of the unit but this would take place in a factory in Calgary. A married couple would be permanently employed as houseparents.



FLOOR PLAN

Typical Eastern  
Slopes Youth Hostel

Alberta Youth Hostels Council  
February 1973

SCALE IN °  
FEET



PROPOSED EASTERN SLOPE YOUTH HOSTELSCOST ANALYSIS FOR ONE CEDAR LOG STRUCTURE

Excavation	\$ 600.00
Foundations (Block)	2,500.00
Building Structure	30,200.00
Building Assembly	4,500.00
Electrical	1,500.00
Power Plant	1,400.00
Plumbing	1,500.00
Septic Tank	1,000.00
Well	1,000.00
Heating	1,500.00
Inspection (By C.Y.H.A.)	300.00
Legal (Permits, Survey, etc.)	500.00
Finish Carpentry	2,000.00
Flooring	2,000.00
Furnishings	2,500.00
Contingency	2,000.00
 TOTAL	 \$55,000.00

Costs of course would vary with the remoteness of the site and availability of labour. This analysis covers a remote fully serviced structure.

The elimination of certain services or the location near a power line would reduce some costs. Revenue from operating is meant to cover operational costs. Capital costs such as above are derived from memberships, grants and sale of services and are not computed to be recovered from overnight fees.

ENDORSEMENTS

977-15

COUNTY OF MOUNTAIN VIEW NO.17

OFFICE OF THE COMMISSIONER  
DIDSBURY, ALBERTA  
TOM OWO



P.O. BOX 100

TELEPHONE 335-3311

19th February, 1973

Mr. Don Campbell,  
President  
CYHA, Mountain Region

Dear Mr. Campbell:

Your letter of February 7th, indicating the proposed expansion of the Canadian Youth Hostels' Association in the Rocky Mountain area, is acknowledged with thanks. May I state in reply how pleased we are to note that new facilities are being planned for Ram River Falls, James Wilson Campground, and Waiparous Creek. We are also pleased to note that memberships in the CYHA and usage of existing facilities have shown rapid increases.

While opportunities for direct involvement as a school system by a school jurisdiction, such as the County of Mountain View No. 17, may be limited, we recognize that improvements in your programme and facilities are very much to the advantage of our students and graduates. The youth hosteling movement has already accomplished much in Europe and on this Continent to bring young people into contact with our most important resource, the countryside in which we live. The CYHA is to be congratulated and encouraged for its attempts to influence more young people in the positive ways emphasized by your programme. We hope that the day will not be too far away when youth hostel facilities will be available in such abundance as to permit student groups to walk or cycle, snowshoe or ski from one overnight camp to another--not only in the better known areas of the Rocky Mountains--but also in the lesser known Foothills country to the west of our County, and, indeed, along the western edge of the entire Province.

We wish you success with your expansion plans as we know that what you are attempting may have a much more significant educational effect on young people than much of the schooling which has traditionally been available to them. We find that among our own student body interest in the outdoors, camping, wildlife and our natural environment in general is increasing at a rapid pace. The CYHA has an important role to fill in making maximum use of the increasing awareness of our youth.

Yours sincerely,

*Harold Jepsen*

Harold Jepsen,  
Superintendent of Schools

HJ:nt

# *Shaughnessy Secondary Vocational School*

*2336 - 53 Avenue S.W.*

*Calgary, Alberta*

*t3e 1l2*

*E.B. Duncan,  
Principal*

February 16th, 1973.

Mr. Don Campbell,  
President,  
C.Y.H.A. Mountain Region,  
455 12th Street, N.W.,  
Calgary 41, Alberta.

Dear Mr. Campbell:

Mr. Sawatzky has asked me to reply to your letter of Feb. 8th. I lead two groups of Junior High School students who used the Ribbon Creek Hostel in the 1971-72 school term.

We found the arrangement very satisfactory. The idea of having the facilities provided and the students do the work of cooking, cleaning and tidying gave them experience in working together and sharing responsibility. The proximity to Calgary means that the transportation costs were well within reasonable limits. Also, the low cost per student for this reservation puts outdoor education programs within reach of more students. We have also used the facilities of other associations in the province but found the cost was beyond what we could handle and the facilities did not suit our purpose as well as C.Y.H.A.. I certainly endorse the construction of more Ribbon Creek type facilities and encourage their use through outdoor education programs in the schools. I believe appreciation of the natural environment can only be taught by direct contact. Where education costs are restricted, the C.Y.H.A. facilities offer an economical way of moving the classroom to nature.

I wish you success in plans.

Sincerely,

Ken. Loose,  
Camping & Hiking Instruction.

KL:APW





## CALGARY SCHOOL BOARD

VICTORIA JR. HIGH

ELEMENTARY SCHOOL

411 - 11 Ave. S.E.

CALGARY, ALBERTA

February 14, 1973

Mr. D. Campbell, President  
Canadian Youth Hostels Association  
455 - 12th St. N.W.  
Calgary, Alberta

Dear Mr. Campbell:

On June 23 - 25 1972 the grade nine students of Victoria Jr. High had occasion to use the Ribbon Creek installation operated by the C.Y.H. Although inclement weather dampened the proceedings we were able to schedule inside activities due to the excellent space available in the structure. Approximately fifty students had an opportunity to experience outdoor camping under proper supervision and instruction.

For this school, financing a trip of this nature is a major consideration as many parents in this district have financial problems. The nominal cost of accommodation is a major deciding factor when planning this type of outing. The fact that inside cooking facilities are available and the flexible nature of this structure makes it a most necessary facility.

The availability of scientific literature also is a consideration as pre-teaching can take place before trips are finalized.

I believe that more sites are required closer to the major cities (it is 60 miles one way) and I am sure they will be put to good use during week days as well as weekends.

The staff of Victoria Jr. High heartily endorse the C.Y.H. program and we have used their instructors to stimulate students interest in camping.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "J.H. Franklin".

J.H. Franklin  
Principal  
Victoria Jr. High School



# Life Skills Education

I.P.A.C.I. Project

---

February 12, 1973.

Mr. Don Campbell,  
President,  
C.Y.H.A., Mountain Region,  
455 - 12th Street N.W.,  
CALGARY 41, Alberta.

Dear Mr. Campbell:

With regard to your letter of February 8th we are certainly pleased to endorse the Canadian Youth Hostels Association plan to construct more mountain hostels of the type at Ribbon Creek. Our group found the weekend spent there was most enjoyable and the facilities excellent.

We did not understand from your letter if you required recommendations from our members as to where they might see a need for these hostels to be built. Several people in our group have had many years of experience in the mountains and might well be qualified to give their opinions on this matter should it be required.

Peace,

Ken Low,  
Director.

:sem

COUNTY OF MOUNTAIN VIEW NO. 17  
SUNDRE SCHOOL

PRINCIPAL'S OFFICE  
PH. 225-3939

SUNDRE, ALTA.

Feb. 15/73

Mr. Don Campbell  
President  
C.Y.H.A., Mountain Region  
455 - 12 Street N.W.  
Calgary

Dear Mr. Campbell:

Re: your letter of Feb. 7/73.

The teachers and Principal of this school feel that we could make use of facilities especially at James Wilson Camp Grounds for outdoor education school classes. We would likely use these and facilities at Ram River and Waiparous Creek especially for recreation purposes.

I'm confident that other schools, school boards, scouts, cross country skiers and other organizations would be enthusiastic about facilities in these areas.

Thank you and good luck.

Yours sincerely

  
Reg Fryling



## Bishop Kidd School

1420 - 28<sup>th</sup> Street S.E.  
CALGARY - ALBERTA

February 20, 1973

Mr. D. Campbell  
President,  
C.Y.H.A., Mountain Region  
455 - 12th Street N.W.  
Calgary, Alberta

Dear Sir:

In the past years, I have made use of the Hostel facilities at Rampart Creek, Mosquito Creek and Mount Eisenhower, each time with groups of students. At the present time we are in the process of planning a trip to Ribbon Creek which will involve thirty students, four parents and two school staff. Had we not been able to use Hostel facilities, these groups would have been unable to afford such outings.

I am finding that it is becoming increasingly difficult to book groups into the Hostels because of waiting lists. This is increasingly frustrating since the interest in outdoor trips is keen amongst the students and the benefits of such trips is becoming more evident to teachers in general.

I look forward with anticipation to an expansion of Hostel facilities in the Calgary area.

Sincerely,

M.R. Fyten  
B. Ed.  
Bishop Kidd School

MF:ef

# southern alberta recreation council

P.O. Box 125  
Lethbridge, Alberta

April 11, 1973

Mr. Don Campbell  
Canadian Youth Hostel Association  
Mountain Region  
455 - 12th Street N.W.  
Calgary 41, Alberta

Dear Don:

At a recent meeting of the Southern Alberta Recreation Council, your proposal for a Youth Hostel in the Westcastle area was discussed.

I am pleased to inform you that our council endorsed your bid for lands in the area for such a purpose.


Council did suggest, however, that you give serious consideration to the possibility of re-locating your proposed hostel in the Beaver Mines Lake area. We feel that such a site has numerous advantages which we would be pleased to discuss with you at your convenience.

Our Brief to the Environment Conservation Authority will include an endorsement for your Youth Hostel program.

I look forward to the possibility of meeting with you in the near future to discuss our proposal.

Best regards.

Yours very truly,

  
Larry Beres  
Executive-Secretary

LB/vb

**Recreation for everyone in your Community!**

977-22



# BISHOP CARROLL HIGH SCHOOL

4624 RICHARD ROAD S.W., CALGARY, ALBERTA

T3E 6L1

TELEPHONE 249-6601

*Principal:* R. E. Lowery, M.S., Ed.D.

*V.P. Personnel:* T. D. Halbert, M.Ed., Ed.D.

*V.P. Administration:* A. F. McLean, M.A., Ed.D.

*Activities & P.R.:* R. Whitburn, B.Ed.

*Member:*

NASSP Model Schools  
Project

May 16, 1973.

Mr. Don Campbell,  
President,  
C.Y.H.A., Mountain Region,  
455 - 12 Street N. W.,  
Calgary, Alberta.

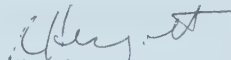
Dear Mr. Campbell,

We have an active Mountain Club at our school which fosters Cross-Country Skiing and Backpacking. Our membership is about seventy students and ten faculty and staff. We are most interested in possible development of Youth Hostels on public land, such as the Forestry Area.

High School students cannot afford large sums of money for accommodation nor transportation. Additional Hostels especially in the Forestry Zone, would be most welcome.

Good luck in future negotiations.

Sincerely,

  
E. R. Hergott,  
Teacher.



977-23

February 20, 1973


Mr. Don Campbell, President  
C.Y.H.A. Mountain Region  
455, 12 Street, N.W.  
CALGARY, Alberta

Dear Mr. Campbell:

The Men's Intramural Council of the University of Calgary has been using the C.Y.H.A.'s Youth Hostels since the spring of 1972. This recreational resource has assisted us in providing a most adventurous activity for the student body of this campus. We have mainly been using the Hilda Creek Hostel for a snowshoe weekend in early spring. The inaccessibility of the Ribbon Creek Youth Hostel by bus has forced us to go a long way from Calgary to find a hostel which is vacant on a given weekend. Last year this activity was the most popular of any of our forty-eight activities because it was adventurous and unique. It provided the students with an experience that otherwise may have been bypassed. This year we could easily fill all of your hostels with University of Calgary students if only they were available or accessible by bus. The Ribbon Creek Youth Hostel is a "super hostel" and more hostels like it would certainly enhance "backroad" travel across Canada. As chairman of the Men's Intramural Council, I wholeheartedly endorse the construction of more multi-use hostels in Alberta for use by all persons travelling or exploring the backroads of this province. Youth hostels provide a practical first hand way of seeing the 'real' Alberta.

I sincerely hope that this letter will be of assistance.

Yours truly,

  
Don Sandford, Chairman  
Men's Intramural Council  
The University of Calgary

DS/cm





977-24

**SOUTHERN ALBERTA ZONE  
CANADIAN SKI PATROL SYSTEM**

123 7th Ave. S.  
Lethbridge, Alta  
February 15, 1973

Mr. Don Campbell  
Canadian Youth Hostels  
455- 12th St. N. W.  
Calgary 41

Dear Mr. Campbell,

On behalf of the members of the Southern Alberta Zone, Canadian Ski Patrol System I would like to wish you success in your goal of establishing a Youth Hostel in the West Castle area.

Our members feel that there is a dire need for this type of accommodation, especially during the winter when camping is precluded who wish to stay in the area as inexpensively as possible.

The sketch of the proposed building would indicate that such a structure would fit very well with the environment. It would be an attractive and extremely functional addition to the recreation facilities in what we feel is one of the last great "undiscovered" areas in the province.

Many of our members have expressed an interest in accommodation such as yours, and would be interested in using the facilities. Of course we ultimately need facilities of our own right at the mountain, but we have no means of financing such a venture at present.

You have our wholehearted support for your project, and I hope you will be successful in the very near future.

Yours truly,

Bryan F. Wilson  
President, Southern Alberta Zone  
Canadian Ski Patrol System



977-25

## *Parks and Recreation Department*

PHONE 627-4322

PINCHER CREEK, ALBERTA

P.O. BOX 159  
PINCHER CREEK, ALBERTA

February 21, 1973

Alberta Youth Hostels Council  
10922 - 88 Avenue  
EDMONTON, Alberta

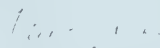
Sirs:

The Pincher Creek Regional Parks and Recreation Board is in receipt of your brief to the Environmental Conservation Authority concerning the establishment of a Youth Hostel on Syncline Brook in the West Castle area. The Board resolved that I should write a letter indicating that the Board is supportive, in principle, of your proposal.

The Pincher Creek School Division and the Pincher Creek Regional Parks and Recreation Board are interested in conducting outdoor education programs and feel that a facility of this nature would facilitate the conducting of these programs.

Best of luck on this venture.

Sincerely,

  
J. C. Waddle  
Superintendent  
Parks & Recreation

HCW/vaj

**THE WILLIAM ROPER HULL HOME**

RESIDENTIAL TREATMENT CENTRE FOR EMOTIONALLY DISTURBED CHILDREN

2223-ANDERSON ROAD S.W. R.R. 3 CALGARY, ALBERTA T2J 2T8

WILLIAM ROPER HULL HOME GROUP HOME

WILLIAM ROPER HULL HOME EDUCATIONAL CENTRE

PLEASE FORWARD ALL CORRESPONDENCE TO THE EXECUTIVE DIRECTOR

February 15, 1973.

Mr. Don Campbell,  
President,  
C.Y.H.A., Mountain Region,  
455 - 12th St. N.W.,  
CALGARY, Alberta.

Dear Mr. Campbell:

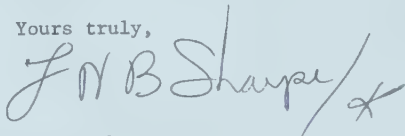
In reply to your letter dated February 8th in which you propose building more "Ribbon Creek" type hostels. The staff and children of the William Roper Hull Home, were delighted to hear this and wish your Association every success in this venture.

One area we would like to suggest is the "Jumping Pound Creek" area and I feel sure this would be very convenient for other Calgary based institutions. Other areas in order of preference would be "Porcupine Hills", and "Clearwater Forestry Reserves".

I might add, being a member of the Association, we make use of the present hostel facilities, summer and winter and look forward to more of them being built.

Thank you for making us aware of your future plans and once again, trust you will have success in your proposals.

Yours truly,



AO:em

F.N.B. Sharpe,  
Executive Director.

GOVERNMENT OF THE PROVINCE OF ALBERTA  
DEPARTMENT OF PUBLIC WELFARE

SPRUCE CLIFF CENTRE  
Spruce Drive, S.W.  
Calgary, Alberta  
T3C 3A4

FILE NO. ...



DATE: March 1, 1973

Canadian Youth Hostel Association  
455-12 Street N.W.  
Calgary, Alta.

Dear Sirs:

This letter is to indicate our support of the construction of multiple use youth hostels on public land.

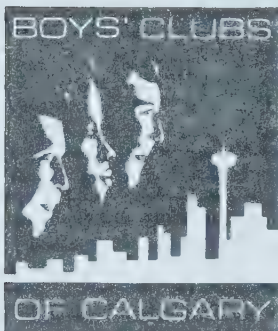
Providing for the educational and recreational needs of the teens in our care is at best a difficult task. The type of inexpensive facilities that the Youth Hostel Association provides can ease this task and we hope to be able to make more use of them in the future.

Sincerely

A handwritten signature in cursive script, appearing to read 'R.M. Harding'.

R.M. Harding  
Activities Coordinator  
Spruce Cliff Home

RMH/t1



LANGEVIN SERVICE CENTRE,  
712 - 5th Street, S.E.,  
CALGARY 21, Alberta.  
Phone: 265-9465



February 19th, 1973.

*Renfrew Boys' Club.*

Mr. Don Campbell,  
President,  
C.Y.H.A., Mountain Region,  
455 - 12th Street N. W.,  
CALGARY,  
Alberta.

*Montgomery Boys' Club.*

Dear Mr. Campbell:

*Forest Lawn Boys' Club.*

This letter is to fully endorse the activities of the Canadian Youth Hostel Association (Mountain Region) in their attempts to develop a chain of mountain hostels and shelters. Organizations like ourselves are realizing the values of outdoor and winter camping programs for our young people. Without overnight accommodation in our foothill and mountain areas, it makes winter outings almost impossible. We rely on the few hostels now available to initiate beginners to winter camping activities. From overnight accommodation in these hostels, youngsters can branch out and learn more advanced camping techniques. With increased use of the few hostels now available, it severely restricts the number of winter excursions our organization can undertake in one year. Recent trends point towards even increased use of these facilities and a real need to develop more such hostels.

*Renfrew Girls' Club.*

*Millican-Ogden Boys' Club.*

*Camp Adventure*

*Special Projects*

It is therefore the wish of our organization, with a membership of well over 2000 young people between the ages of 8 and 16, that the Youth Hostel Association endeavor to pursue the possibility of developing more hostel accommodations in our foothills and mountain recreation areas.

EXECUTIVE DIRECTOR:  
J. Keith Pattinson.

Yours truly,

*Al Schaffer*

Al Schaffer,  
Director - Camping Services,  
Boys' Clubs of Calgary.

AS/djn



## THE ALPINE CLUB OF CANADA

*Canada's National Mountaineering Club*

26 Warwick Drive S. W.  
CALGARY, Alberta  
March 12, 1973

Canadian Youth Hostel Association  
Mountain Region  
455-12th Street N. W.  
CALGARY, Alberta

ATTENTION: Mr. Don Campbell, President

Dear Mr. Campbell:

We understand that the Canadian Youth Hostel Association is undertaking the construction of a number of multiple-use-type hostels in the mountains and foothills regions of Alberta during the next few years. We understand that these would provide overnight accommodation and would have "house-parents" in charge.

With the ever-increasing demand for outdoor recreation in Alberta, this program will be a very positive contribution to the recreational needs of all Albertans, whether or not they choose to become members of the C.Y.H. Association.

We wholeheartedly endorse your program and hope that you will be able to carry it to a successful conclusion.

Yours very truly,

D. J. Forest  
EASTERN VICE-PRESIDENT

DJF/bas

977-30



63rd St. Pius Boy Scouts  
1404 - 22A Street N.W.  
Calgary, Alberta

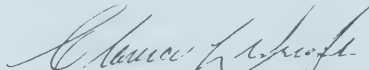
March 20th, 1973

Mr. Don Campbell,  
President,  
C.Y.H.A., Mountain Region  
455 - 12 Street N.W.,  
Calgary, Alberta

Dear Mr. Campbell:

Further to your letter of February 28th, 1973 to which I have been asked to reply, it is with pleasure that I write wishing you and your association great success in your planning the construction of greater numbers of hostels throughout the mountain regions. It has always been a pleasure to be able to avail ourselves of the Canadian Youth Hostels in the scouting movement when required. We would certainly have no hesitation in urging the Alberta Government to permit you to build further hostels and expand your services to the youth of today and further generations in the years to come.

Yours sincerely,

  
Clarence I. Wright, Chairman  
Group Committee

CLW/lrw





977-31

GLENROSE HOSPITAL

July 4, 1973

10230-111 AVENUE  
EDMONTON, ALBERTA  
474-5451 TSG 087

Dr. Trost,  
Environment Conservation Authority,  
9912 - 107th Street,  
Edmonton, Alberta.

Dear Dr. Trost:

I would like to voice my support for the  
Canadian Youth Hostel Association submission for hostel  
sites.

I believe that hostels provide a valuable  
recreational service at minimal cost to Canadians and  
are much needed to accommodate the growing number of  
outdoor enthusiasts. The Glenrose Hospital has utilized  
Youth Hostels on occasion to accommodate groups of  
campers (camping is part of the treatment program for  
some of our emotionally disturbed children). I person-  
ally have been a life member of the C.Y.H.A. for seven  
years and have enjoyed the benefits of the hostels and  
would like to continue to do so.

Thank you for your consideration.

Yours sincerely,

*Pat Bogorus*  
(Miss) Pat Bogorus,  
Director,  
Recreation and Volunteer  
Services.

FB:hb





Department of

**Ed·u·ca·tion**

Government of the Province of Alberta

977-32

Executive Building, 10105 - 109 Street, Edmonton, Alberta

T5J 2V2

Telephone:

AC403, TELEX: ALTAEDCOMM, TWX: ED ADMIN EDM

June 29, 1973

Dr. W. R. Trost  
Chairman, Environmental Conservation Authority  
8th Floor, 9912 - 107 Street  
Edmonton, Alberta

Dear Sir:

I am writing in support of a brief developed by the Alberta Youth Hostels Council (C.Y.H.A.), entitled "proposals for education and recreation: development proposals for the eastern slopes of the Canadian Rockies, Alberta, Canada (June, 1973)." The proposals, as presented in this document indicate the need for the kind of supervised facilities that the Alberta Youth Hostels Council wishes to provide along the eastern slopes of the Rockies. Interest in and concern for preservation of the environment is evident in the content of pages three and four which seek to establish the need for permanent youth hostels on the eastern slopes.

There has been a good deal of interest in outdoor studies, many of which focus upon environmental concerns and the relationship of man to his environment, in the past three to five years. Low-cost supervised overnight accommodation such as that proposed in the A.Y.H.C. brief could be effective in facilitating field trips by school students as a part of their education program in the schools. It is my understanding that existing youth hostels, particularly in the southern part of the province, are already being used extensively by school personnel and their students for such purposes. It must be obvious that "on the scene" study of the environment by students can lead them to a greater awareness and understanding of the delicacies of the ecological balance which exist. Furthermore, there is no better place to develop a keen awareness of and appreciation for the natural environment than through direct contact with it.

Please consider this as a strong expression of support for the program and plans as outlined by the Alberta Youth Hostels Council. Furthermore, I would like to recommend support by the Government of Alberta of the development proposals for the eastern slopes of the Canadian Rockies in Alberta, as stated in the brief.



Department of

**Ed·u·ca·tion**

977-33

Government of the Province of Alberta

Executive Building, 10105 - 109 Street, Edmonton, Alberta

T5J 2V2

Telephone:

AC403, TELEX: ALTAEDCOMM, TWX: ED ADMIN EDM

Page 2

Dr. W. R. Trost

Chairman, Environmental Conservation Authority

Thank you for giving the foregoing your consideration.

Yours sincerely,

A handwritten signature in cursive script, reading "H. G. Sherk".

H. G. Sherk

Associate Director of Curriculum

HGS:dfh

Enclosure



Department of  
**Edu·ca·tion**  
Government of the Province of Alberta

977-34

Executive Building, 10105 - 109 Street, Edmonton, Alberta

T5J 2V2

Telephone: 229-3202

AC403, TELEX: ALTAEDCOMM, TWX: ED ADMIN EDM

June 29, 1973

Dr. W. R. Trost, Chairman  
Environment Conservation Authority  
9912 - 107 Street  
Edmonton, Alberta  
T5K 1G5

Dear Dr. Trost:

It has come to my attention that the Canadian Youth Hostels Association through the Alberta Youth Hostels Council, is presenting a brief at your hearings, regarding Land Use and Resource Development in the Eastern Slopes.

It is entirely likely that the field of out-door education will be a rapidly expanding one over the next several years. In addition, a rapidly expanding concern for certain aspects of Environmental Education will likely be evidenced. It has been brought to the attention of the Alberta Department of Education on more than one occasion that one of the limiting features regarding expansion of such programs has been the lack of facilities such as those proposed in the brief of the Alberta Youth Hostels Council. I should like to go on record personally, and from the context of my position of an Acting Associate Director of Curriculum, with the Alberta Department of Education as supporting the proposal suggested by the Alberta Youth Hostels Council. I would expect that many school boards would also support these proposals and in fact, have received information which would suggest that some had already formally done so.

Trusting that you and your commission will give every consideration to the above mentioned proposal, and thanking you in advance for such consideration, I remain.

Yours truly,

G. B. Hawley  
Acting Associate Director of Curriculum  
Curriculum Branch

GBH:wh

cc: E. A. Torgunrud, Director of Curriculum; Mr. L. Hurst.

977-35



# GIRL GUIDES OF CANADA

CALGARY AREA

2140 Brownsea Drive N.W. - Calgary, Alberta. T2N 3G9

June 19th, 1973

TO WHOM IT MAY CONCERN

Dear Sirs:

The Calgary Area Executive Committee of the Girl Guides of Canada at their executive meeting June 19th, 1973 wholly endorse the brief prepared and presented by Miss Rosemary Nation and are in full accordance with its contents. This executive is the governing body of all the Guides, Brownies and Rangers in the Calgary Area which number approximately 8000 girls.

Yours very truly,

Mrs. G. W. Rosser  
AREA COMMISSIONER

FR/dr



PHONE: 283-0745

283-0746

AREA CODE: 403



ADVANCED EDUCATION

Devonian Building  
11160 Jasper Avenue  
Edmonton, Alberta, Canada

T5K 0L1

July 5, 1973

Dr. W.R. Trost  
Chairman, Environmental Conservation Authority  
8th Floor, 9912 - 107 Street  
Edmonton, Alberta

Dear Dr. Trost:

I am writing to support the brief prepared by the Alberta Youth Hostels Council entitled "Development Proposals for the Eastern Slopes of the Canadian Rockies Alberta Canada". The proposals presented in this document indicate a definite need to establish a chain of youth hostels in the eastern slopes of Alberta. There is growing concern for the environment and the proposals developed by the Alberta Youth Hostels Council make adequate provision for environmental conservation and environmental education.

The concept of environmental education is relatively new but is rapidly gaining ascendancy as the most significant means of informing the public about environmental preservation. Supervised youth hostels in the eastern slopes could provide not only low cost accommodation for persons exploring those regions but could also act as centres for organized study of the environment.

Please consider this letter an expression of support for the programs and plans outlined by the Alberta Youth Hostels Council.

Yours sincerely,

A handwritten signature in cursive script that reads "Dave Beckman".

H.R. David Beckman  
Consultant in Continuing Education

MT. EISENHOWER (IKE INN) YOUTH HOSTELOVERNIGHTS - OCTOBER 1, 1971 - SEPTEMBER 30, 1972

		<u>Seniors</u> (over 17)	<u>Juniors</u> (17 & under)
October 9, 1971	Junior Forest Rangers	4	18
October 10, 1971	Junior Forest Rangers	4	18
October 16, 1971	4th Elks Triwood Scouts	16	31
October 23, 1971	Janna Bowey & Group	2	4
November 4, 1971	A.T.A. Social Studies Council	19	-
February 10, 1972	Junior Forest Wardens	3	6
February 19, 1972	Braeside Cub Pack	7	34
April 3-5, 1972	Carstairs Recreation	9	15
April 29, 1972	William Roper Hull Home	5	8
May 11-13, 1972	Sylvan Lake School	12	102
May 25, 1972	Assumption Outdoor Education	1	2
May 26, 1972	Assumption Outdoor Education	2	27
May 27, 1972	Assumption Outdoor Education	2	27
June 2, 1972	Carbon School	7	27
June 4-6, 1972	Calabogie Public School	15	99
June 9, 1972	Assumption School	4	30
June 13-15, 1972	Carstairs Recreation Board	9	117
June 16, 1972	Okotoks School	5	24
June 17, 1972	Okotoks School	5	24
July 8, 1972	4th Elks Triwood Scouts	6	19
July 21, 1972	American Youth Hostels Group	1	10
July 22, 1972	American Youth Hostels Group	1	10
July 23, 1972	American Youth Hostels Group	9	2
July 27, 1972	American Youth Hostels Group	11	4
August 7, 1972	Mountain Region Cycle Club	-	10
August 12, 1972	John Cresluk & Group	2	9
August 13, 1972	Ann Cresluk & Group	-	10
August 19-21, 1972	Thomas Kelnan & Group 9CR	6	27
September 20-23,'72	George P. Vanier School	16	124
September 24, 1972	Bishop Carroll Mountain Club	3	12
September 27-30,'72	George P. Vanier School	20	128
	INDIVIDUAL SUMMER & WINTER USEAGE	1,714	497
	JUNIOR (17 & under)	1,475	
	SENIOR (over 17)	1,920	
	GRAND TOTAL	<u>3,395</u>	



RIBBON CREEK YOUTH HOSTELOVERNIGHTS - OCTOBER 1, 1971 - SEPTEMBER 30, 1972

		Seniors (over 17)	Juniors (17 & under)
October 9-10, 1971	Unitarian Canada	12	12
October 23, 1971	Work Party	24	-
October 30, 1971	Work Party	7	1
November 13, 1971	46 Brentwood Cub Pack	7	19
November 20, 1971	Work Party	6	-
December 1, 1971	Work Party	3	-
December 27, 1971	25th Rover Scout Crew	1	7
January 21, 1972	72nd Scout Troup	5	29
February 3-5, 1972	Calgary Boys Club	2	14
February 12, 1972	Swingers Group Y.M.C.A.	4	16
February 12, 1972	4th Elks Triwood Cubs	5	16
March 4, 1972	4th Elks Triwood Scouts	6	7
March 31, 1972	Spruce Cliffs Home	2	14
April 4, 1972	Calgary Boys Club	2	4
April 7, 1972	Roper Hull Home	2	6
April 8, 1972	Killarney Baptist Church	7	11
April 22, 1972	131 D. Pack Varsity Acres	6	26
April 22, 1972	46th Scouts Pack	6	21
April 22, 1972	R.T. Alderman Junior High Ecology Club	2	34
May 2, 1972	Three Hills School Division	-	8
May 20, 1972	Junior Forest Wardens	4	11
June 2, 1972	Langevin Community School	3	26
June 9, 1972	George P. Vanier Jr. High	10	31
June 15, 1972	Shaughnessy Secondary Voc. School	6	34
June 22, 1972	Shaughnessy School	3	9
June 22, 1972	Victoria School	8	50
June 11, 1972	Colin Watson & Group	-	14
July 16, 1972	Dave Mabell & Group	3	10
August 23, 1972	City Recreation Dept.	-	18
August 30, 1972	Faculty of Environmental Design, U.ofC.	362	-
September 22, 1972	Victoria Teen Club	5	34
September 29, 1972	Department of Anthropology	15	-
September 30, 1972	Mount Royal College/Alberta Voc. Centre		
	Calgary Staff Outdoor Educational Workshop	15	4
	INDIVIDUAL SUMMER & WINTER USEAGE	716	360
	JUNIOR (17 & under)	845	
	SENIOR (over 17)	1,259	
	GRAND TOTAL	2,104	

MR. RATHBONE:

As many of you know, the Alberta Youth Hostels Council proposes to build a chain of 15 youth hostels on the eastern slopes. One of these hostels is proposed for the drainage basin of the Athabasca River and would be located on a two acre site in the Cadomin area. Further locations which we would suggest for later development in the Athabasca River basin are at Medicine Lodge, Hinton, Brule, the McLeod River and Fairfax Lake.

I should mention at this point that in matters of location and land requirement we have tried to make our proposal as flexible as possible. Although we have suggested specific locations and a two acre site for each hostel, we remain flexible in the sense that we have a team studying the proposed sites to determine the best location for each hostel. The two acre requirement is merely a suggestion arising from our desire to have locations which are more or less natural, the basic idea being that we don't want a hostel located between a parking lot and a service station. So these requirements for the locations should be understood in that light.

It should also be understood that we are very interested in input from residents of the regions in which the hostels will be located.

A number of questions arise with regard to our proposal. First, what is the Alberta Youth Hostels Council? Briefly, the Alberta Youth Hostels Council represents, for many public relations purposes, the two Alberta regions of the Canadian Youth Hostels Association, which is the Canadian affiliate of the International Youth Hostels Federation.

The origins of our association are old and honourable. Hostelling originated in Europe in the late nineteenth century. It was the brainchild of a school teacher, Richard Schirrmann, who felt that the limits of the educational process are not to be found within the four walls of a classroom.

The Canadian movement is similarly founded on an educational base. The first youth hostel in Canada was established in 1933 at Bragg Creek by two Calgary school teachers, Catherine and Mary Barclay, who were, by the way, recently honoured as citizens of the year by the Calgary Junior Chamber of Commerce.

To this day Alberta remains in the forefront of Canadian youth hostelling. Of the 53 CYHA hostels in Canada, 15 are presently operated by the two Alberta regional offices, the Mountain Region in Calgary and the North West region in Edmonton. Since 1937 we have been affiliated with the International Youth Hostels Federation. Thus we offer our members access to 4,500 youth hostels in 48 countries. Membership in our organization is open to all, and 27,000 Canadians, including more than 6,000 Albertans, are among the 2,000,000 world members.

The CYHA is chartered under the federal Companies Act as a non-profit, educational, recreational, cultural and charitable organization. Incidentally, I'd like to add that until the present time we have operated largely as a volunteer organization. However along with our proposals for developing the physical facilities which you have before you, we are proposing as well a new organizational and operating structure for the movement in Alberta.

The second question which arises quite naturally is, where does our organization stand on eastern slopes development? Since membership in the CYHA is open to all who wish to join and since that

membership comprises all sorts of individuals from oil company employees to snowmobilers to conservationists, the views of our organization are necessarily very broad. We recognize that the resources of the eastern slopes must be allocated among competing uses in a manner that will maximize the welfare of all Albertans. Furthermore, we feel that recreational usage will figure very prominently in the optimal solution. To this end we think it's both necessary and desirable that the educational and recreational potential of the area be fully realized. This can only be accomplished by more readily available access to the area.

Access is not merely a matter of roads. For example, while Albertans certainly have access to the Kananaskis lakes, a day trip to the area from Calgary involves a two hour drive in and a two hour drive back. Four hours of driving in one day is not a recreational experience. Accommodation is also a necessary part of making an area accessible to recreational users.

The campgrounds which dot the forestry trunk road are an important step toward realizing this. But given the climate of the area, they are far from being a complete answer. While youth hostels are not the complete answer either, we feel they are an important part of the answer.

Many members, being avid outdoorsmen and conservationists, may be disturbed by the possibility of change and development in the area. However, we recognize that no government or other human institution can at the present time realistically expect to effectively control or contain the population pressures which the future will bring. The best that can be done is to anticipate the problems which an increasing population will bring and to deal with them as intelligently as possible. This may very well include making more of our dwindling hinterland available for all uses.

What is a CYHA hostel? Briefly, it is simple overnight accommodation, as simple as we can possibly make it. The standards of the International Youth Hostels Federation call for simple overnight accommodation suitable for the needs of school groups and youth clubs as well as individual travellers on educational, recreational and cultural tours. The hostels have cooking facilities and male and female dormitories supervised by full-time houseparents. Drugs, smoking in dormitories, et cetera, are strictly prohibited. Individuals are normally limited to a stay of three days in any one hostel, although this may be extended at the discretion of the houseparent. These services are provided for the modest fee of \$1 per night for senior members and 75 cents for junior members.

Since our hostels are run according to international guidelines and since access is restricted, many problems associated with transient hostels sponsored by various levels of government are avoided. Moreover, since CYHA hostels are self-supporting insofar as operating expenditures are concerned, they are, I believe, an asset to the areas in which they exist.

We will be looking for houseparents for the eastern slopes hostels if our proposals are favourably received. We would strongly favour houseparents from the vicinity of a particular hostel. I think this is very desirable and necessary from the point of view of making the hostel a part of the community in which it is located.

The last question I would like to answer is, who uses hostels? We have two sorts of users, educational users and individual recreational users. As noted, the origins of the movement are to be found in the hostel's educational purpose. Unfortunately, in the past

this purpose was underemphasized in Alberta since many of our hostels in the national parks are too small to be used by school classes or to justify the presence of full-time houseparents. Two of our three present hostels are of sufficient size for this purpose and in recent years these hostels, at Eisenhower Junction in Banff National Park and Ribbon Creek in the Kananaskis valley, have been used predominantly by school classes, church groups, youth groups, Scout groups and young people's organizations of all descriptions.

Section 138 subsection C of The Alberta School Act provides that any school board "may arrange for, undertake or sponsor, for its pupils and at its own cost or otherwise, educational, cultural or recreational trips inside or outside its district or division." More and more in recent years the possibilities which this provision presents have been explored by educators in this province who find that youth hostels are a perfect base for field trips and studying geography, geology, archaeology and natural history. So much in fact has this demand for our facilities burgeoned that we are convinced it is in education that our future lies.

It is this sort of hostel that we propose for the eastern slopes, a modern, efficient, year-round hostel supervised by permanent houseparents and adequate to serve the needs of an entire school class. The secondary purpose of the hostels is almost equally important. For a wide variety of individuals they will provide year-round access to what we believe is destined to become one of Alberta's leading recreational regions. Our individual members are actively involved in all varieties of outdoor recreation although the vast majority are primarily interested in skiing, cycling, mountain climbing, canoeing and cross-country skiing.

Since the lifeblood of our organization is in the involvement of citizens in nearby communities, it is our sincere hope that youth hostels in the eastern slopes will serve, as they have in Calgary and Edmonton, as a focal point for the development of local hostelling organizations offering programs and such activities as those I have mentioned.

It should be noted that this secondary purpose is vital to the primary educational purpose in that it subsidizes the educational use of hostels. While the individual recreational user must pay a \$10 yearly membership fee, this is not the case for the educational user. An entire school group can gain access to our facilities for the same \$10 membership fee. Furthermore, if a facility is used during weekdays by a school group on a legitimate educational trip, no membership fee whatsoever is required.

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

In the final analysis you want to have hostels separated by a reasonable distance of about 40 or 50 miles. Is that correct?

MR. RATHBONE:

That's correct.

MR. KINISKY:

Your early developments will be set up against the mountains in places like Cadomin for example, and other developments will follow later. What are we talking about when we say "later"?

MR. RATHBONE:

Basically, I think we're talking about hypothetical future development since later development would depend largely on how well the initial 15 youth hostels are received. We would expect that the initial 15 youth hostels would be developed over a period of five to ten years. Response to the increased demand, which we feel will be realized, would be the determining factor in the development of later hostels.

MR. KINISKY:

So for these early developments then you're looking at transportation in the conventional sense, buses or something like that, as a means of bringing in the young people. Subsequently, for these smaller developments, the young people can move from place to place on bicycles, on foot or by whatever method they choose.

MR. RATHBONE:

That's correct, although it should be understood that in the day of the 10 speed bicycle 40 or 50 miles between hostels is a reasonable distance. We would expect that these initial 15 hostels would also be used by recreational users, cross-country skiers in the winter for example.

MR. KINISKY:

What happens when we try to move a youngster all the way from Hinton to Grande Cache by bicycle? That's a pretty good trip on a truck.

MR. RATHBONE:

As you've noted, the later hostels are for later development. Of course we are not in any sense being rigid or overly specific because we propose these hostels as a very general sort of suggestion. At the moment we feel that this is the way we would like to respond to an increasing demand in the future. However, a large part of our response would depend on what happened in the interim, such as what the province did in the way of developing roads.

MR. KINISKY:

What happens as far as access from the cities is concerned? For example, is there a hostel anywhere between Edmonton and Hinton?



MR. RATHBONE:

Not at the present time.

MR. KINISKY:

This is something that would be in the future?

MR. RATHBONE:

That's quite correct, but of course it's not in the eastern slopes.

MR. DOWLING:

There has been some concern expressed by people who perhaps do not understand the youth hostel movement and equate youth hostellers with transient youth. Without going into too many gory details, could you make a separating definition between the activities of youth hostellers and the activities of transient youth?

MR. RATHBONE:

Well that limits me, doesn't it? I'm sure that many people in the audience are familiar with youth hostelling in Europe and that is what we are trying to promote in Canada. But because Canada is less densely populated than Europe, our activities are necessarily much more organized. In other words, these hostels are separated from the cities by some distance. This means that school groups must use buses, therefore it's very highly organized. Of course all of these school groups bring their own chaperones and their own teachers.

As far as recreational use is concerned, you find that a great many hostels in Europe are very close together and therefore it's possible for people to go on walking tours in the summer. This isn't practical in Canada, so our members tend to be bicyclists and skiers.

To distinguish us from transient hostels and to distinguish our members from transient hostellers, I suppose you could say that a CYHA member goes to a hostel for some purpose other than getting to the hostel, whereas my experience with transient hostels is that young people go to these places for no apparent purpose or for a purpose which is not connected in any vital way with the area in which the hostel is located. Furthermore, our hostels are primarily located in undeveloped wilderness areas, whereas transient hostels tend to be located in populated centres where transients congregate.

MR. DOWLING:

Among other things, I gather that the organization and supervision of youth hostels are key factors in making a separate definition of these groups. With respect to supervision, what sort of problems do you face in acquiring suitable houseparents for each youth hostel?

MR. RATHBONE:

The answer to that question may require a brief bit of history. I think it should be noted that over the past five years our organization has experienced a growth in use of approximately 20 to 25 per cent a year. This has caused severe problems. However, it has also opened a great many opportunities that were not open five years ago. Five years ago we were a completely voluntary organization and we had no trouble obtaining volunteer houseparents, people who would

take their families and live in the houseparents' quarters in our youth hostels for two weeks or a month in the summertime. Since the demand has increased so greatly, it has become a more taxing responsibility than it was five years ago.

At present we are having great difficulties securing the services of adequate houseparents without paying them, and we are finding it necessary to pay them. We developed our proposals for the eastern slopes on the assumption that we would be paying houseparents. In addition to giving them free accommodation, we would be paying them a sum in the order of \$300 or \$400 a month I would assume. This would make them full-time houseparents. Hopefully it would eliminate a lot of our operating problems.

MR. DOWLING:

You may be able to find employment for some of the transient youth.

MR. RATHBONE:

I would like to squelch that statement before ...

MR. DOWLING:

I'm awfully sorry. I didn't mean to put words into your mouth. We'll let it be known that the origin of the thought was not yours.

MR. RATHBONE:

I would just like to carry this a little further before it gets carried out of the room. We have found in general that our best houseparents are older people, retired people. They're a very desirable and very limited resource from our point of view. However, there is a fairly limited supply of retired people who could handle a class of even properly supervised 12 year olds.

I would suggest as an alternative a young couple perhaps saving for a home of their own. They could live in a hostel for a period of two or three years while they're saving. Of course our operating practice of being closed from 10:00 in the morning until 4:00 in the afternoon would make it possible for the husband of this couple to hold an outside job at the same time. So I think this is a possibility which we'll be exploring more in the future.

MR. DOWLING:

You have asked for a number of small parcels of land upon which individual hostels could be constructed and developed. What else is incumbent upon government in order to make this chain of youth hostels a success?

MR. RATHBONE:

The question is so perceptive I can only conclude that somehow you have access to our accounts. Incidentally, being a federally chartered society under the federal Companies Act, we are required to have a yearly audited statement and these can and will be made available to the Authority.

I'll give a brief outline. Our revenues are derived from three sources: the \$1 overnight fee, membership fees and the operation of two sporting goods stores, the Mountain Shop in Edmonton and the Hostel Shop in Calgary. These revenues would probably be adequate to



allow us to develop this chain of 15 hostels at the rate of perhaps one hostel a year or one hostel every two years. We feel that we could do this comfortably. If, however, it was considered desirable by the Authority that this chain be developed sooner, I'm afraid we would be looking for government support either in terms of outright grants or long-term, low-interest loans.

MR. DOWLING:

In the event that land were leased to your organization, do you have a priority list of sites which you would like to develop?

MR. RATHBONE:

We have to a certain extent. First, we have purchased land in Calgary and we plan to develop a hostel there in the future. We are also negotiating for land in Canmore, so I would expect that a Canmore youth hostel would be next on our list. Beyond this it's largely a matter of access to hostels because the remainder of the hostels that we've suggested, except for the one at Bragg Creek, are on the forestry trunk road which at the present time is not really adequate to give access in the wintertime. So our response would depend on the actions of the government in the upgrading of the forestry trunk road.

MR. DOWLING:

Would you be dependent upon the upgrading and winter maintenance of the forestry trunk road in order to make the chain of hostels a success?

MR. RATHBONE:

We're not interested in establishing a youth hostel which would be a financial drain on the organization.

MR. DOWLING:

Is your membership exclusive?

MR. RATHBONE:

Membership is not at all exclusive. It is open to anyone. Our membership fee is \$10 a year for senior members and \$5 a year for junior members. Furthermore, access is available to all kids through any school group. They all go to school, don't they? A lot of them belong to Scouts, church groups and similar organizations and membership is available at only \$10 per group. So that's fairly inexpensive.

MR. DOWLING:

What about the traveller who comes along the road and is not a member of your organization? It's pouring rain, he has to hole up some place and you're the only place within the next 20 miles. Does he get in?

MR. RATHBONE:

Speaking as an occasional houseparent, I think you have to be realistic and fairly humane about this. If it's a reasonable night and I wouldn't mind sleeping out myself, I'd give him the gate. If it's raining and he's cold and hungry, well, what can you do? Sometimes you don't even charge them the overnight fee. You just let them chop wood in the morning or something like this.

MR. DOWLING:

Speaking specifically about the Athabasca basin, you have one youth hostel designated for Cadomin. What activities would you carry on at Cadomin?

MR. RATHBONE:

Even though I have been to Cadomin, I'm afraid that I would still have to refer that question to Mr. Hurst. I should say that the Cadomin hostel has been very favourably received by the town itself. They have even expressed an interest in perhaps going into this with us financially. Users of this hostel would be primarily school groups. However, I'm not really familiar with the activities they would be carrying on there, so I would like to ask Mr. Lorne Hurst, the Secretary-Treasurer of the Youth Hostels Council, to answer that question.

MR. HURST: [From the floor]

Lorne Hurst.

The first and primary activity at the Cadomin youth hostel would be field studies. We have selected Cadomin as our first site in the Athabasca River basin, principally at the request of the Yellowhead School Division. We are working with the Yellowhead School Division, the towns of Hinton and Edson and the community of Cadomin. The Cadomin recreation board is working closely with us. It will be essentially a community-based organization at Cadomin with strong participation and membership from the Hinton-Edson area.

In addition to students from the west Yellowhead area, we would have students from other parts of Alberta. We see them coming in by school bus from points as far away as Grande Prairie, Cardston, Medicine Hat - you name it - probably leaving on a Monday from their home area and going home on a Friday. That would give them Tuesday, Wednesday and Thursday as full days in the Cadomin area.

Before they leave, their teachers will be supplied with resource materials including information on the natural and political history of the area, archeological features, commerce, geography and industry. It will be as comprehensive as we can make it so classes will have well-rounded field studies by coming into the area. While they are there their whole course of studies will be essentially under the direction of their teachers and leaders.

Our houseparents may be some very suitable local people or they may be people who have come in and who have been selected by local people.

In addition to the school use there will be our own membership use. These are the people who pay \$10, perhaps in Edmonton, Red Deer or Jasper, and will come for recreational activities such as hiking. There's a very good two day hike from Cadomin to the Miette Hot Springs area through the Fiddle Pass. Another good hike is down through Mountain Park into the southern area. When the road is paved cyclists could come to Cadomin. Other activities would be cross-country skiing, mountain climbing and photography.

MR. DOWLING:

Would the open pit mining carried on in the area conflict with your activities?

MR. HURST:

It may well figure as part of the course of studies for school children coming into the area. We may work closely with the mining company and ask them to share some of their facilities with us.

The location of the hostel has been selected very carefully because Cadomin is noted for its winds. Big storms come up suddenly and make things a bit miserable. The site is on the old trail leading up past what is now the minesite and it's out of the wind, accessible and very close to the main road. So we don't see a conflict. It's not near the Luscar mine and it's not near the lime mine. It's across on the other mountain and we don't see any problem.

DR. TROST:

You said that you may require a new organizational structure and perhaps a new financial structure if you go ahead with these new hostels. Have you handled that part?

MR. RATHBONE:

We've had operating difficulties in the last few years because of the influx of transients on the highways. We've suffered a lot of vandalism. Our membership use has increased over the last five years at a rate of approximately 20 to 25 per cent a year. This has made us realize that our past and present operating structure as a voluntary service organization is becoming inadequate, therefore we intend to become somewhat more professional with the hiring of full-time houseparents and at least two full-time overall managers or supervisors of operations.

DR. TROST:

Would you retain the same corporate structure that you now have?

MR. RATHBONE:

Essentially that's true, yes.

DR. TROST:

It wouldn't take a new act or anything of that sort?

MR. RATHBONE:

No.

DR. TROST:

Will the Crown land you use be on a lease basis?

MR. RATHBONE:

I would presume that would be the most suitable arrangement. We have no particular desire for the land itself. I would presume that even a licence to this land, with some assurance that development would not impinge too closely on our natural area would be quite sufficient.

DR. TROST:

In terms of years, what kind of lease or licence do you think you need?

MR. RATHBONE:

The type of hostel we are suggesting would be large enough for approximately 50 beds, and at the present time this would cost approximately \$60,000. To make this worth our while we would have to have at least a 30 year lease.

## DISCUSSION ON CANADIAN YOUTH HOSTELS ASSOCIATION PROPOSAL

DR. LAYCOCK:

Dr. A. Laycock, Alberta Geographical Society.

In its discussions concerning these hearings the Alberta Geographical Society has strongly supported the proposals of the Youth Hostels Council. I would like to add a personal comment of support. Two of my three children have spent the past year in Europe where in many countries there is strong government support of the development and maintenance of youth hostels. Their very educational year was spent relatively cheaply and effectively largely because of this organization and the governments supporting it. I would favour similar support in Canada, but failing that, help in site location would be a very useful step.

DR. POWELL:

John Powell, representing the Federation of Alberta Naturalists.

First, I'll state that we are in support of the proposals of the Youth Hostels Council. But we do have some questions. One of them is, why do you require 200 acres on Kootenay Plains? We are a bit perturbed about hostels of just one size, the \$55,000 or \$60,000 plan. We'd like to know to what extent the youth hostels are thinking about flexibility. We foresee much greater use in a centre like Bragg Creek or Canmore. Do they have enough built-in flexibility to start off with a bigger hostel in such a place?

We are also a bit concerned about use by school groups. What happens if the youth hostel has, say, a busload of 40 students with chaperones and then a crowd of members arrives and there's not enough accommodation for the individual members?

My final question is, will these hostels be connected with any trail developments?

MR. POPE:

T. Pope, Canadian Ski Scene.

Where do the people using hostels come from, or what is the scale of Albertans, Canadians and non-Canadians? I'm curious about the history and what you expect for the future.

DR. HABGOOD:

Dr. H. Habgood, Alpine Club of Canada.

I note that you are moving in the direction of having permanent houseparents. I would just like to say that the Alpine Club has found that maintenance and general ecological awareness increases tremendously if you have somebody in a hut all the time, not only maintaining the hut but just creating a good atmosphere. This also helps to alleviate the problem when you arrange accommodation for one large group and then a group of members comes. If you have somebody on the site he can perhaps squeeze people up a little bit. Otherwise the large group which arrived first might tend to be very forbidding and the members may just camp around the area and perhaps cause a lot of degradation.



MR. W. FLOOK:

For the record I wish to state that in addition to the support contained in submissions brought before the Authority in the public hearings held to date, the following individuals and groups have submitted letters expressing their support for the Canadian Youth Hostels Council proposal:

Mr. G. B. Hawley, Acting Associate Director of Curriculum,  
Alberta Department of Education  
Mr. Terry Gamble, Mountain Region Cycle Club, Calgary  
Mr. H. G. Sherk, Associate Director of Curriculum,  
Alberta Department of Education  
Mr. Robert Russell, Leader, Liberal Party of Alberta  
Mr. J. C. Hamilton, Edmonton  
Mr. Donald Wales, Calgary  
Mr. Harold Jepson, Superintendent of Schools,  
County of Mountain View No. 17  
Miss Eleanor McMurtry, Calgary  
Mr. D. J. Malcolm, Calgary  
Dr. Gerald W. Hankins, Calgary  
Miss Phyllis Timperly, Alberta Bicycle Association  
Mr. L. Bateman, Edmonton  
Mr. Ron Patrick, Edmonton  
Mr. David Beckman, Consultant in Continuing Education,  
Edmonton

MR. RATHBONE:

First, I'd like to thank Dr. Laycock for supporting our proposal.

Dr. Powell asked a very pertinent question regarding the 200 acres which found its way into our initial proposal for the Kootenay Plains hostel. I'd just like to clarify that by reading the statement I made at the Rocky Mountain House hearing:

Originally a hostel had been proposed on the site adjacent to the Kootenay Plains and a request had been made that a 200 acre natural site be reserved at a location adjacent to the hostel for purposes of nature study. These requests were mistakenly submitted however, as a proposal for a 220 acre site for the hostel itself. Moreover it has recently come to our attention that the area is already a source of contention. Since we have no desire to intrude into the presently existing controversy, we have decided to revise our submission and now propose that Whirlpool Point Hostel be established on a 2 acre site near the David Thompson Highway at a point some 4 miles west of the Kootenay Plains.

I think I could say that was a mistake on our part which came about at a time when we had not researched sufficiently the sites of the hostels.

Dr. Powell was also curious about the flexibility of our hostels. I believe that perhaps due to the impossibility of presenting all the possible solutions to our problem we did not give you enough information. What we have presented at the front of our official Proposals for Education and Recreation submission is that these 15 hostels be built more or less along the lines of the Ribbon Creek Hostel which is, I believe, a 48 or 52 bed hostel. This hostel, although there may be inadequacies in its design, has served its purpose very adequately for five years. It's a cedar log building and as you know cedar log buildings are very flexible. You can take parts off when you initially build them and add them on later or you can

make additions to the hostel like those represented by the drawings in our proposal.

In addition to this, I don't think we're as inflexible as we may appear. We've received support from the Calgary School Board in which they suggest that a minimum size for a hostel acceptable to them would be 60 beds and we're taking this under advisement. But it isn't really a problem because the concept of hostel design has been so well explored in Europe that there wouldn't be an additional cost to us. There have been books published on hostel designs. These books contain hundreds of designs. When we start looking at individual sites and at the use we anticipate those sites would receive our proposals will be more site-oriented.

Regarding the problem of conflicts with school groups and individual recreational users, the hostel has two large dormitories and four smaller dormitories. So the problem can be partially handled by putting the individual users in the small four bed dormitories, and the school groups in the large dormitories.

Mr. Hurst has expressed a desire to handle the fourth question on trail developments, so I'll leave that to him.

Mr. Pope of Canadian Ski Scene asked us about who uses our hostels and the scale of use. That is a very difficult question. I would suggest that from October until the first part of May the use is overwhelmingly school groups and recreational users from the Calgary and Edmonton areas. From May to October the use is overwhelmingly non-Albertan. It's foreign and primarily American although this summer there has been a large influx of people from Germany, France and Japan in particular, which is I suppose a response to the changing foreign currency situation. A large number of American cyclists use our hostels on an organized cycle trip basis. They take trips from Jasper to Calgary on their bicycles.

We would expect that the pattern of use of our proposed eastern slopes hostels would be similar to the pattern in the mountain region. However, I think it would be realistic to expect that at first the eastern slopes hostels would be used more by Albertans than by foreigners because it would take foreigners a longer time to become familiar with the area.

Lastly, I would like to thank Dr. Habgood of the Alpine Club for his comments, suggestions and general support.

MR. HURST:

Lorne Hurst.

Dr. Powell's fourth question dealt with our involvement with trail developments. This June, July and August, we have a three man team investigating trail development possibilities in areas near the original 15 hostels. They are about half through their job now. This naturally is a preliminary type survey insofar as potential development could be considerable in the eastern slopes. We will produce booklets describing the trails. We will make proposals to the Department of Lands and Forests asking for their concurrence or their liaison with us. Of first importance is their approval for the development of trails and secondly, working in liaison with them in the actual development if they do give us permission.

We think trails are a very important part of outdoor recreation. There are cross-country ski trails as well as hiking trails. Some



trails will probably lead through areas of archeological and natural interest and others will be useful for activities such as mountain climbing and canoeing.

**LAND USE  
and  
RESOURCE DEVELOPMENT  
in the  
EASTERN SLOPES**

**EDMONTON  
JULY 7**

**ENVIRONMENT CONSERVATION  
AUTHORITY**

**ALBERTA**





992-1

**NORTH - WESTERN SNOWMOBILE ASSOCIATION**

**P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2**

SUBMITTED TO:

ALBERTA PROVINCIAL GOVERNMENT

RE: USES OF THE EASTERN SLOPES OF THE ROCKY MOUNTAINS.

SUBMITTED BY:

NORTH-WESTERN SNOWMOBILE ASSOCIATION

(which is a society registered in the province of Alberta and whose objects are carried out across the entire province. It is the largest single CLUB of snowmobile users in the province and has a province wide paid up membership of about 750 people.)

Presented By: G. McLean



992-2

**NORTH - WESTERN SNOWMOBILE ASSOCIATION**

**P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2**

1. SELF-IMPOSED LIMITS OF THIS BRIEF.

We proposed to put forward the interests of snowmobile users. These are the people who have placed an investment and are continuing to invest in the form of outdoor enjoyment they have choosen. We submit the following to enhance the winter enjoyment of the outdoors.

"WINTER ENJOYMENT BY SNOWMOBILERS"



992-3


NORTH - WESTERN SNOWMOBILE ASSOCIATION

P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2

## 2. DISTINGUISHMENT FROM OTHERS FORMS OF VEHICLES .

Subsequent legislation must recognize snow vehicles. They are not "trail bikes", nor "A.T.V.s", nor "4 x 4 trucks". This is true because of the special conditions necessary for their use. They do not require any prior "development" for their use. They are not used during the summer time (i.e. when "people pressure" is at a high). They do require snow, which stop all others from passing.

"SNOWMOBILES MUST BE CONSIDERED SEPERATELY"

The logo for the North-Western Snowmobile Association (NWSA) features the lowercase letters "nwsa" in a bold, white, sans-serif font. The letters are set against a dark, rectangular background that appears to be a textured surface, possibly a snowmobile's body panel.

992-4

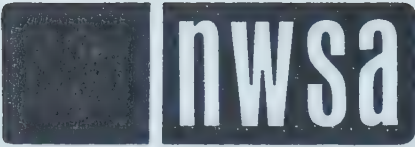
**NORTH - WESTERN SNOWMOBILE ASSOCIATION**

**P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2**

### 3. ECOLOGICAL QUESTION.

Popular press writing have suggested that snowmobiles damage the route they travel on. This is not true (Documentation is Available from the Alberta Snowmobile Association, Edmonton and from the International Snowmobile Industry Association, Montreal and will be given in another brief). Therefore the conclusion that use does not mean abuse may be applied in all areas of the province. Furthermore, snowmobilers do not require "development" in addition to what now exists, mountain roads, new town sites are not necessary for snowmobilers.

" USE DOES NOT MEAN ABUSE "



992-5

**NORTH - WESTERN SNOWMOBILE ASSOCIATION**

**P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2**

#### 4. SNOWMOBILE USE AREAS.

In some areas a solution which has been suggested are "use areas". Circumstances in Alberta do not call for this because of these factors. Alberta is blessed with a large area and small population. We must avoid conjunction which will in turn cause problems which do not now exist such as collisions between snowmobiles, maintenance of parking areas and roads and plainly too many people in a small area. Use areas also make groomed trails necessary and this large expense can be avoided by not putting people in a defined area. At present no funds are spent on snowmobile users.

"NO USE AREAS"





992-6

NORTH - WESTERN SNOWMOBILE ASSOCIATION

P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2

##### 5. SNOWMOBILES AND THE TOURIST INDUSTRY.

At present snowmobile owners are significantly contributing to the tourist industry at a time when use of existing services (service Station, hotels, motels, cafe, etc.) is at a low ebb. Also, as this activity takes place during inclement weather, users enjoy the out of doors at a time when there are very few other people out. They also patronize presently established business that welcome off season receipts. Snowmobilers are volume users of services, but disperse during enjoyment of the out doors.

"SNOWMOBILERS SIGNIFICANTLY CONTRIBUTE TO OFF SEASON  
USE OF EXISTING FACILITIES, AND SHOULD BE ENCOURAGED  
TO DO SO."



992-7

NORTH - WESTERN SNOWMOBILE ASSOCIATION

P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2

6. PRESENT SITUATION.

By enlarge the present situation is satisfactory. Sweeping restriction is not necessary or desirable. Changes in present legislation affecting snowmobiles which are necessary do not come under the scope of these hearings (i.e. highway traffic act, Off-Highway Vehicle Act.) Further government intervention is not necessary.

"SWEEPING CHANGES,RE: SNOWMOBILE USERS, IS NOT  
REQUIRED"



992-8

NORTH - WESTERN SNOWMOBILE ASSOCIATION

P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2

7. WILDERNESS PRINCIPLE.

We agree with a principle of Wilderness Areas, but these must not be areas for special interest groups. If areas are set aside they must be set aside for everyone, and not set aside FOR special interest groups.

"THE OUT OF DOORS ARE FOR THE ENJOYMENT OF  
EVERYONE"



992-9

**NORTH - WESTERN SNOWMOBILE ASSOCIATION**

**P.O. BOX 4144, EDMONTON, ALBERTA T6E 4T2**

Submitted by the North-Western Snowmobile  
Association for your consideration, with  
thanks for the opportunity by

Don Ayers, President,  
North-Western Snowmobile  
Association

Gary McLean, Treasurer,  
North-Western Snowmobile  
Association

## QUESTIONING BY THE AUTHORITY

MR. DOWLING:

What organizations are there within the province representing people in this recreational activity?

MR. MCLEAN:

Clubs like the Edmonton Snowmobile Club and the Sherwood Park Snowmobile Club are associated in a group called the Alberta Snowmobile Association. The Western Canada Snowmobile Federation is comprised of provincial groups such as the ASA. So the order would be local club, the Alberta Snowmobile Association and the Western Canada Snowmobile Federation.

The club I represent is a single province-wide club not directly associated with the ASA.

MR. DOWLING:

Where does your group fit into this?

MR. MCLEAN:

We're unique. We are the biggest club and operate in four areas of the province. To some extent we tend to be a duplication of the ASA but with a distinctly separate membership.

DR. TROST:

Some of the information about the ecological effects of snowmobiles that you refer to has already been presented to us. Have you any additional information on ecological effects in this province?

MR. MCLEAN:

I can't supply you with anything more than what the ASA and ISIA have already given you.

Brief submitted by: Mr. Allan Welsh  
Edmonton, Alberta

MR. WELSH:

The title of my presentation is: The Youthful Native Offender, Crime and Confinement, What is Defensible Space and Is It on the Eastern Slopes. What I plan to do is throw the ball to the ECA, which I feel is the organization that can take over where I leave off.

At the moment I have taken a year off from my professional work to work in the area of socio-environmental problems. I myself was one of ten in a family. We slept three in a bed on the verandah during the Depression. Maybe this is why I'm so concerned about looking far enough ahead for our young people.

I've been working in rehabilitation of young people for some 25 years, starting with the period of re-establishment after the war when people 18 years old came back to an entirely different industrial economy. A lot of them were not prepared to work for \$65 a month or in my case \$15 plus what the government paid. What I'm suggesting is that we must meet the challenge of change, we must look at the eastern slopes in terms of 50 years.

I'm the Chairman of Penal Reform for our rehabilitation society. We are just winding up a report to the Senate committee on law and reform. I would like to give you the case histories of a few of my Native clients. I'm just going to mention some of my Metis friends, where they came from, where they went and what could have happened if we had had rehabilitation centres on the eastern slopes. I'm picking out the eastern slopes because we've been thrown out everywhere else.

Billy came from Prince Albert where, as you saw in the headlines last night, they are proposing a riot. When Billy came here he was too proud to meet me because he thought I was with a 'do-gooder' group. He had \$14 which gave him a choice between buying a pair of shoes or getting drunk and celebrating. He got drunk and was stabbed. I visited him for three weeks in the hospital. Then he disappeared. He came from the eastern slopes but we brought him here into our environment. We have to look at this matter seriously and adopt a new natural approach in the environmental area where these people come from.

I brought two girls in from the Fort, one a Metis called Marie and the other a white girl called Lorraine. Marie came from the reservation carrying a bag with her stuff in it. She had nothing but ordinary shoes though it was 23 below. On the other hand the white girl had nice luggage and overshoes. I took Marie to 96th Street as this was the only place she'd go. She wouldn't give me her last name.

My next friend, Neil, came from St. Vincent de Paul where they let our friend Rivard out to water the skating rink and then the Government of Quebec decided they wouldn't bother trying to find him because of the \$18 million in drugs.

I'm a little angry this morning. It wasn't our young people on that mine sweeper coming into British Columbia; it wasn't our young people who landed in Red Deer a while ago with a million dollars worth of drugs; it isn't our young people who are causing this problem of profiteering and the advertising of liquor - which is the worst drug.

There are a couple of cases of what I call promoters, people operating under these wild grants that go to everybody but the Metis. Our friend Leonard was sent to Rocky Mountain House to study but our Metis friends were sent out to the Fort. Another fellow named Doug, who got about seven grants, was one of our patients out at Lamont where we were thrown out. He is now at the corrections meeting in Regina setting up a national institute to get more grants to run more wild ideas under our various federal government programs.

I'm just going to mention some of the areas we have been thrown out of. We had a drug farm at Lamont, but 325 people said this was none of their business and told us to get out. Today we are trying to start something in Onoway. I'm going out Tuesday. This, we hope, will be another example of nature having an effect on people who have never had a chance. We were thrown out of our Halfway House in the Eastwood community, Spruce Cliff in Calgary and Ridgewood. We have mental patients in two places in east Edmonton. Nobody wants them. We must establish rehabilitation centres in the eastern slopes where we must occupy and fortify Crown land now. There is no way we can come in there later when all this land is leased and people can say they were there first.

I've made a basic study of urban renewal and design and its relationship to crime. If you people read the book Defensible Space, I think you'll get my point in a very few chapters. The jails are overflowing. We have lean-tos at Drumheller and trailers in another place. Seventy-eight per cent of the people at Peace River and forty per cent of those at Fort Saskatchewan are Metis or Indian. We have an equivalent number at Prince Albert where we are having these riots. Let's look at this thing and do something different.

We have a wonderful group of professionals. I have met about ten who support what I'm trying to do. One is working on a survey on this subject in the Northwest Territories, which should be out soon. These people all agree with me but they don't think anybody is going to do anything. I say the ECA has enough guts under Section 7 of their Act to get some of these people together and work independently of red tape.

Presently, the professionals are frustrated. The government grants are generally resulting in endless studies, and 'sloganism' is replacing the hard work in rehabilitation that I'm hoping to get going on the eastern slopes. The social planners are underpaid, unaccepted and underinvolved. The 223 existing organizations, I maintain, should work through the ECA instead of having this senseless competition.

I would like to say that the young people's basic worth has not been recognized in any of the planning. I have appeared before city council where I have been smeared and framed. In a secret meeting nine pages were removed from a report on encroachments on our parkland. They are rather impolitely looking over the subject again. We have an environmentalist as a superintendent and he can't even get this secret report.

There's a beautiful thing on the horizon. Our old people have been asked to take these offenders into their homes. I think this is a little extreme. But if we set this thing up on the eastern slopes, we can have the older people as administrators and leaders under this New Horizons program. We can also bring in our Indian people as teachers in environmental education. It might not be the whole answer but we have to do something.

We have to get together at the level where public funds are parcelled out. If we are going to do anything on the eastern slopes



as social environmentalists we have to get where the action is and that's at the budget level, which is a policy level.

I have a plan from the States for an establishment for disadvantaged people. In the centre of this complex there would be an administration section. On the circumference we would have all the people who would be better off in an environmental study area than sitting in a drunk tank on 96th Street. There must be something other than \$28.50 per day, which is the cost of keeping our kids in our youth detention centres.

I look forward to a partnership of government, the volunteer and the private sector. Our friend from the petroleum association said they are going to take \$5 billion out of the eastern slopes. I say that if we work with those people, they would also put something in. We stopped Imperial Oil from taking over the last parkland around the airport. When we got through, they understood what our problem was and invited me to the opening of their building. The Indians want to work with the government and they also want to work with industry.

We must get a recreational authority under the ECA with a broad concept of education for living. When I was on the parks board I said: "We don't need parks and recreation because parks are for people and recreation is education for living." They said: "What are you talking about?" We got back to the agenda and they threw on the table a two and one-half year study of our young people's problems in northeast Edmonton and said they couldn't be bothered with detail. These kids are not detail, they are people.

I am suggesting that we could bring all the disadvantaged people - the mentally retarded, the deaf, the blind, the dumb and the deformed - together in one area where they could help each other. We would place the emphasis on formal education only to the extent that these people could absorb it. We could also take the socially handicapped - one out of five kids in our district is from a broken home - as well as those people who can't do their thing in formal education.

Antisocial people should be stopped at the level of about Grade 2 and put into a year of study where they could look at nature. I claim they would be completely reformed.

For the young addict - we have more heroin here than they have in the whole of England - we should provide studies and work. On our drug farm all we had was a place to sleep because we couldn't get any money.

We could parole our Native people to an environmental centre. There is no way they can come from confinement into the city. This fellow Bill just off the train said he thought all the cars were rushing at him and that people were talking about him. In a hospital ward he was whispering because he thought everybody was listening. These people from the reserves are not accustomed to what they see in the city, so why chuck them in jail?

Alcoholics are the biggest problem in Canada today. We now have a big advertising program endorsed by adults with money going in adults' pockets. This is what this study among our Indian friends in the Northwest Territories is about. I'm just saying that they will take environmental education.

The problem is meaningful prevention. Over the last 20 years I have seen a lot of garbage in studies. At the YMCA they were going to set aside a floor for pre-delinquent children. Eight years later we

were looking after children in the old union building who never did get in there.

I have chosen a site close to Calgary between the Bow River and the Oldman River. All I need is somebody to say that this is the property of the people, and not of those who were here yesterday. The ECA, with its power under Section 7, is a logical catalyst to bring together all those who want to do something but don't have any clout on their own.

The advantage of what I'm saying is that no new entities need be created. Let's not have another 40 groups. We had 30 groups of people in drug work meeting together; they said they hated each other's guts so they wouldn't give authority to call the next meeting. I am saying that we should bring together the professionals and recognize, accept and pay them. We should get the volunteers and the physical resources together on the eastern slopes. Then we could have this administration centre and around it all these disadvantaged people. It's the cheapest way. We are paying up to \$125 a day to treat alcoholics.

If the hundreds of social planning groups would consider this proposal not as a threat but as something on which we could pull together, we could have a firm approach which would harmonize conflicting interests. I feel the ECA is nicely constituted to initiate this. I'm not an expert in this area. I'm just taking a year to find out whether there is something we can do besides having mine sweepers come to our west coast.

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

I would like to point out that Mr. Welsh has given very generously of his time, talents and money on behalf of society and I think that deserves some acknowledgment at this time.

You bring to us the problem of so-called criminals, drug addicts and alcoholics. Are you suggesting that the one place you have selected in the eastern slopes would be sufficient to treat the problems of all these people?

MR. WELSH:

This plan I have shows a circle in an area of approximately 20 square miles. As long as these people are separated for purposes of intensive treatment, there is no reason why they can't get together for social, educational and specifically environmental concerns.

MR. KINISKY:

How large an area would you need to have controlled access to?

MR. WELSH:

Twenty square miles. It's right off the highway, but I was hoping you experts could take over from my amateur approach.

MR. KINISKY:

Could you give us a more detailed description of the location?

MR. WELSH:

It's where the Bow River and the South Ghost come together on the highway. It's marked off now as a proposed wildland recreation area. I maintain that we should keep these places only so wild. There is such a thing as enjoying things.

MR. KINISKY:

If such a place is established, approximately how many people would there be at any one time?

MR. WELSH:

I would say we could have 1,000 people in five categories of the disadvantaged. Take the deaf for instance. The man who devoted his life to these people said that other than giving them an education, nobody cared. Once they leave the School for the Deaf they still have to live. This is where a setting like that would be so wonderful.

MR. KINISKY:

Am I correct in assuming that you are talking about five separate building establishments to house those in each of the five categories?

MR. WELSH:

Yes.

MR. KINISKY:

Outside the time devoted to education and treatment, would these people gather, if they chose to do so, in a central place where they could socialize and talk to each other?

MR. WELSH:

...and help each other. The old people are desperate to give of their teachings and abilities to the younger generation. But we are not going to win with the type of submissions that have come from some old people.

There is a doctor coming through here from Montreal on Wednesday who has given his time to the corrections meeting in Regina. He's going to Metiskow and coming here to meet me. These are the people you can use instead of making them look ridiculous.

MR. DOWLING:

You are referring to a permanent establishment on the eastern slopes where people would come for rehabilitation and remain until rehabilitation had taken place, is that correct?

MR. WELSH:

Yes.

MR. DOWLING:

So this would be a complete alternative to any other type of establishment which has existed before?

MR. WELSH:

Yes. I might just mention that our drug farm at Lamont was called ADAPP, which is alternatives to detention, parole and probation. So you pinned it down exactly.

MR. DOWLING:

Could you give us some broad information concerning the New Horizons program?

MR. WELSH:

The government said they were going to use our old people in this area. The program is a \$10 million program to help the old people get involved. We had friendship clubs all over the city. The professionals said they were too good a thing and took them over. As a result all they are doing now is playing bingo instead of entertaining us.

MR. DOWLING:

If you had 1,000 people under treatment at this rehabilitation centre how much staff would you require?

MR. WELSH:

I could do it with one permanent staff member. When I was head of the federation we had one half-time person. We cut the recreation budget in this city in half. If you get the volunteers all you need is somebody to look after the red tape.

MR. DOWLING:

Regardless of whether you have volunteers or not, you will have to have quarters for them while they are executing their duties.

MR. WELSH:

As I see the map, the site can't be very far from Calgary. I don't think the professionals would have to stay there.

DR. TROST:

What do you mean when you say that your centres have been thrown out of various locations?

MR. WELSH:

In Lamont, for example, we moved onto a farm with the idea of rehabilitating kids on drugs. But 325 people turned up at a meeting and screamed holy something or other. We found out that the main reason they were there was that Lamont never had anything so exciting. They weren't there out of concern.

I must admit that we didn't have enough professionals. We should have gone to the community first. The people who administered this were addicts themselves and there was no way we could get any professional help or interest. We have a boys camp that is going to close down because the City of Edmonton doesn't give a damn.

DR. TROST:

Were you thrown out by some community action?

MR. WELSH:

Yes. And they were well-organized. The gas station wouldn't even serve us.

DR. TROST:

What happened to your centre when it was thrown out?

MR. WELSH:

We paid to the end of the lease. We are now trying Onoway. The only trouble is it's five miles from the biggest beer fest in Alberta. I would rather go to the eastern slopes.

DR. TROST:

Have you centres that are functioning now that aren't being thrown out?

MR. WELSH:

The organization I work with is faced with a charge of \$600 per month for what I call a glass case created for us by somebody. We want a place where we can blend into the community. We were thrown out of Eastwood. The development permit was challenged by the community.

DR. TROST:

You say you have some material that is being prepared by your colleagues.

MR. WELSH:

Yes. We're amateurs except for the former head of Drug and Alcohol Abuse who couldn't stand the red tape. He is now under contract to the Northwest Territories. This will be a formal presentation and touches on much of what I have said about our Metis and Indians. He has listed about eight leaders in the Indian community who he feels would be excited about this.

DR. TROST:

Could you make a copy of that material available to us?

MR. WELSH:

He said it's confidential, but I have read it.

DR. TROST:

Could you make it confidentially available to us?

MR. WELSH:

Yes.

DR. TROST:

You suggest that the ECA bring together a group of people of diverse interests who are working in this area to see if something common can be brought forward in the eastern slopes.

MR. WELSH:

I think it's a beautiful thought. A section in your Act creates you as a body that can do this instead of having 223 organizations. What was originally the Council of Community Services became the Council of Social Agencies and then the Welfare Council. All it did in six years as far as I am concerned was change its name three times. Not that they weren't wonderful people, but there was this senseless competition and lack of leadership, which you can give.

DR. TROST:

Is not such a council still in existence?

MR. WELSH:

Yes, but it is an exercise in futility. On the parks board I found that the engineers and the boys with money had taken over practically every available piece of parkland. It wasn't even made public.

DR. TROST:

Sometime after the hearings are over would you be prepared to discuss that part of it in greater detail?

MR. WELSH:

There's nothing I'd like better. I'd take another year out of my practice.



FUTURE LAND USE-  
ALBERTA'S FOOTHILLS

Submitted By: The Finlay's - Joy, Brett, Warren, Rhonda, Cam

Presented By: Mrs. J. Finlay

---

We commend the Alberta Government for providing opportunities for people to present their views before decisions on land use are finalized. We propose that in the past decisions have been taken that appear to meet immediate needs, but negate long-term responsibilities. Land use in the Alberta foothills generally has been exploitation for immediate requirements by industry with little apparent thought for long-term use by the general urban public. We realize that until very recently urbanites have not appeared to require such open space for recreation and therefore have not spoken up. Further, we appreciate that the major exploiters of these foothill lands - forestry and strip mining - have been providing revenue for the coffers of our province and jobs for people. However, a balance must be struck between extractive use and recreation. Alberta is fortunate to have such large tracts of land, lets assure future generations that there will be places of great extent where they can recreate.

We are concerned about the forestry industry and their regeneration practices. We appreciate that they are trying to meet standards set up by governments, but we suggest these standards should be re-examined. We recently hiked in the Pepper's Lake area near Hinton and noted that regeneration seems barely to have begun if started at all and yet this area has been logged at least 10-14 years ago. If the estimated 80 year recycle is to actually take place then a different practice must be instituted. Maybe there are areas that cannot be logged at all because of the fragile nature and a possible extremely long-term regeneration. We appreciate that this is the first time Alberta has been logged and therefore practices are being undertaken that are effective in other

parts of the world, but not proven here. We suggest these practices be examined in relationship to Alberta's climate, not Northern Europe or the eastern U.S.A. where they are effective. Before large blocks of timbered land are allowed to be stripped, a careful analysis should be made. After all this is crown land and belongs to the people of Alberta, their heritage. Any use must be carefully examined before commitment.

We are opposed to large areas being clear cut by forestry practices that in other parts of the world have been outlawed for a long time. We refer to clear cutting near Brule and rumors about what is going on, or will go on, in the Peace River Country by a large American soap company now in the pulp industry.

The general practice of strip mining makes us shudder. We appreciate that the world needs coal and Alberta has the supply, but why wreck the landscape for a few cents a ton. The practices of reclaiming land from strip mining is a farce. One has to but examine the area around Wabamun to know that industry is but putting up a token show on even this area that is so close to Alberta's capital. Back in the foothills, little to nor reclamation is going on. Why should a foreign company be concerned about reclaiming an area, when the profits will not remain in the country. Further, the fragile ecological nature of the vegetation of the foothills and subalpine areas in such that any current practice used that is "economical" will not work. The use of economics is just not practical, because long-term land use by recreators is never taken into account.

We were particularly concerned by the apparent sellout to strip mining at Cache Creek last winter. Looking back, it appears to us that the coal company all along planned to strip mine and only used the principle of underground mining as a lever to obtain Government assistance and appropriate permits. In the future such help should be carefully assessed and balanced out with the long-term land use practice.

We note that the coal industry has permits on much of Alberta's prime foothills land. Before mass permission is given to strip, we

suggest Government members take a tour of Pennsylvania where such striping has been going on a long time. Such a tour to be provided, not by the local mining interests, but by the National Audubon Society or some other conservation group. Our recent reading indicates that little has been done on reclaiming large tracts down there and what has been done is very expensive and would make the price of coal prohibitive. Possibly alternative sources of energy should be examined that would not be as destructive to the environment.

The small bit of reclamation we have seen in western Canada including Wabamun, central Alberta and Saskatchewan, plus experiments in the foothills, led us to believe that such is just not feasible here.

We were most pleased to learn that the Alberta Government requested submissions from the private sector on recreation use of the foothills. Such utilization is where we propose the foothills has the greatest potential for all of Alberta's citizens. We point out however that commercial development must make a profit and therefore will tend to develop for the moneyed few. To counter such operations, the Provincial Government must be prepared to supply financial help and also stipulate in granting approval that these private recreation developments must be inexpensive enough to allow utilization by all citizens. The Government should also provide methods of transportation into these developments so that all peoples can get there at little cost to them. However, an extensive system of roads is not the answer. Other methods such as helicopter and monorail must be considered and subsidized. The use of roads into these prime recreation areas is getting out of hand. Every new map shows further chopping up of these large blocks of land. We suggest that the Government now, if not already started, begin a major study on alternative methods of access. An extensive system of roads is not the answer. Every new roadway further chops up the area and we soon have an extension of suburbia. The Department of Highways should take the lead in finding ways to get people into these prime recreation areas, but not by the internal combustion engine on a paved freeway, or even gravelled trail.

If certain areas are set aside for recreation then a careful look must be taken of the present and proposed land uses. We are concerned that the major winter ranges for large ungulates is under lease to strip mining. It is a known fact that populations of big game are controlled by the availability of winter range. This is particularly the case in northern latitudes. Example of the loss of winter grazing land to these large animals is the flooding of the Kootenay Plains and the coal development of Grand Cache. We suggest that a reassessment must be made of the exploitative use of such lands. The Fish and Wildlife Branch have maps showing winter ungulate range for the foothills and these should now be utilized before strip mining, oil drilling or other erosion uses are implemented. If the Mines and Minerals Branch of the Government used the winter range maps as guides and did not issue permits on these required game areas, then hunting in Alberta would continue to be as advertised in tourist literature.

As for big game, certain streams are very sensitive to fish. We suggest that the information garnered by the Fish and Wildlife Branch be utilized when forestry permits and strip mining developments are being considered. Alberta has prime mountain fishing areas; let's preserve some.

A growing outdoor passtime is the use of all-terrain vehicles such as snowmobiles. These units can cause extensive damage to fragile alpine areas as proven in many places and yet the users of these motorized toboggans must have a place to go. We propose that certain areas be set aside for motor toboggans. They must be large enough to provide the "wilderness experience" that these people require.

In order to properly manage such a large area as the foothills, data must be gathered. I commend the Environment Conservation Authority on beginning such a task, but it is only a beginning. We propose that the total foothills area be broken into blocks; the information now in hand and gathered by the various Branches be placed on detailed maps; then consultants be hired to take a complete inventory of these blocks.

Such an inventory to include geology, soils, plant, bird and mammal distribution map. From this analysis could come a zoning of the total area. Such zoning must be carefully done to avoid the problems encountered by the National Parks when they drew unrealistic and unecological zone boundaries. We realize such an undertaking would be both time-consuming and expensive. But, if the Government is serious in planning for the future then such a total analysis of these foothills must be done before irreparable damage takes place.

The Alberta foothills is the prime watershed of our province and yet people utilizing these lands have little knowledge. Our schools teach little on these areas and yet class field trips are continually visiting them. Campers are going in there by droves as any weekend drive along the forestry trunk road will illustrate. A talk to such visitors will indicate these people have no comprehension of the nature of the fragility of these lands. Further, survival camps are being set up and programmes implemented that teach "living off the land" rather than "living with the land". This is the latter quarter of the 20th Century and people must learn to live with their environment. In view of the continual growing use of the foothills by so many segments of the population, we propose that a major education programme begin. Such a programme should stress man's place in the environment and the intricacies of the foothills watershed. The programme should be geared both for the schools and the general public. If Albertans value these large blocks of land then people must learn how to use them without total abuse. A major programme on interpreting the environment should be instituted. The Canadian Wildlife Service is undertaking such a programme on their areas and the National Parks Branch has done some work. However, Alberta should take the lead and set up a special Environmental Interpretation section geared strictly for the foothills and eastern slopes of the Rockies. Let us learn to use these lands wisely and the best way is to learn about them first. After all this area provides our lifeblood - water, and could be for all Albertans the major recreation area for the future. Let us begin to educate now before it is too late.



## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

You have shown some disposition toward allowing private industry to develop recreational areas in the foothills, and you talk about controls that you would like to see the government put in. Are you thinking of a situation in which a private development is monitored by the government on a regular basis to assure that it is not set up just to make money?

MR. FINLAY:

That's right. But even more important, while the government may not have the funds to develop large areas for recreation, it does have the responsibility of providing them. At the same time, developers have to make a profit. Somehow this has to be balanced. I don't know how this can be done, but it has to be done. Mr. Welsh mentioned the Metis people and other people. Some of these developments are not designed for Metis people and the people on 97th Street. A study done in Edmonton not too long ago showed that two-thirds of all Edmontonians did not leave the city for recreation although the wilds are one of the cheapest forms of recreation.

MR. KINISKY:

In regard to subsidized transportation, you mentioned that the only people who know about and really appreciate the eastern slopes are those who own automobiles, tents and trailers. The vast majority of people don't get out of the city so they simply don't know how to appreciate it. How do we make these people understand that this is a recreational area of tremendous capacity and that they should be riding on trains or buses to enjoy it?

MR. FINLAY:

That was my key point. You must establish an environmental interpretation branch to educate all Albertans. By this I don't mean sitting out in the foothills campgrounds and giving nature talks, but getting into the cities, into 97th Street and Windsor Park and other areas. This would be a large project involving many people and a substantial amount of money. The water of Alberta is our lifeblood. It comes from these areas and unless we educate people we won't have it.

MR. KINISKY:

What do you suggest we do about all the seismic lines, cut lines and exploration roads you mentioned and the unlimited access they provide?

MR. FINLAY:

They are there and we have to live with them and try to utilize them. For example, if you build a road or a monorail system you could use these lines rather than cutting new ones. Unfortunately what usually happens is that our Department of Highways looks at a map, ignores the erosion caused by trails in an area and puts its own in. Probably much of this area will not regenerate within my lifetime or my children's.

MR. KINISKY:

Do you think these old roads could be broken up, ploughed and reseeded?

MR. FINLAY:

I was hiking near Hinton not too long ago. By counting rings on trees in the area you could tell it was logged over at least 14 years ago. The regeneration is negligible. They say it's going to take 80 years to regenerate but I think they are fooling people. Alberta has never been logged over before so we don't know. You can go in and chew it up with tractors and so on and maybe 500 years from now there might be a few trees on it, but they certainly are not coming back very quickly.

MR. KINISKY:

Supposing we adopt the general plan you speak of and fix the disposition of land and resources in the foothills, what would you think about conducting further hearings to get public reaction to subsequent major development proposals?

MR. FINLAY:

That's the only way to handle it. Public interest is continually changing. As time goes on the current interest in conservation might decrease and people might become more interested in development. So you must have continuous public input.

MR. KINISKY:

How would we change this general plan to accommodate the changing attitude of the public?

MR. FINLAY:

You could hold hearings as you suggested and communicate public feelings to your department which in turn could present these to the cabinet and the legislation could be changed. Things have to be continually flexible. Your plan cannot be so detailed as to fix land use and dedicate areas forever. People change.

MR. DOWLING:

Along what lines do you think the eastern slopes should be broken up for purposes of planning? Should it be along watershed lines, ecological lines, political boundaries or what?

MR. FINLAY:

You could use all three and give weight to each one. Watersheds and ecological lines are generally the same. But you certainly don't just draw a line through a map as they did when they assessed the national parks master plan.

MR. DOWLING:

It has been stated that if you want to know where a coal deposit is you have only to look for a big game herd. The herd is standing on it in the wintertime. It has been suggested that alternate winter range might be artificially built by mining companies in other locations. Do you think the game would follow such a plan?



MR. FINLAY:

It's a rather 'way-out' scheme but I think we have to try anything to counter what is now taking place. You could try it on an experimental basis in a small area. Probably you would have to breed animals in a game farm and put them out since these patterns are inbred over thousands of years.

DR. TROST:

We are pleased with your emphasis on the educational aspects of the problem. For your information and that of the public I would like to draw attention to the conference on environmental education that will be held province-wide next spring. It's being held under the auspices of our advisory committee on environmental education which has been working for some two or three years. They think this is an important subject.

Brief submitted by: Mr. D. H. O'Donnell  
Alberta Recreation and  
Parks Association

MR. O'DONNELL:

I am a recreation researcher and planner by profession. I have my own consulting firm and have worked in B.C., Saskatchewan and Alberta.

While sitting in on the hearings over the last two days I have been very frustrated at the reaction to Mr. Kinisky's questions about such factors as dollar value, measurement systems, validity, reliability, range of variants and degrees of error related to research in outdoor recreation activities and tourism.

I submit that substantially valid and reliable answers to these questions can be obtained from existing material. Like any other aspect of social research there are qualifications and limits. However, working within these we have a chance here in Alberta to assemble existing knowledge and produce an up-to-date, comprehensive, composite document that could make a tremendous contribution in the field of recreational research and planning in Canada. Accordingly I would like to make the following recommendation on behalf of the Alberta Recreation and Parks Association.

Since it is in the interest of the Environment Conservation Authority to consider and be aware of all aspects of land planning and use policy it is presented for their information that a study of the cost benefit analysis of the tourist industry in Alberta is possible at this time as a result of research that has been done in the United States, the United Kingdom and other parts of Canada. It is therefore recommended that in order to bring together supporting information, a data bank of outdoor recreation, leisure and tourism research and planning material be established by the Government of Alberta for the use of Alberta recreation researchers and planners.

I have brought along some examples of the kind of data I have collected. This material is necessary for the kinds of documents I prepare. I would like to read the titles of some of them and point out some of the areas of research.

Thomas L. Burton of the Department of Environmental Studies at the University of Waterloo has written a book called Recreational Research and Planning. The table of contents refers to many areas Mr. Kinisky has been asking questions about: The Framework of Recreation Research, Sociological Research in Recreation, Planning for Research, Planning for Outdoor Recreation in Urban Areas and Wilderness Areas, The Demand for Recreation and Current Trends in Recreation. Unfortunately this book is oriented to Great Britain.

The National Forest Experimental Station in Pennsylvania has published Recreation Symposium Proceedings. It contains chapters on: The Recreation Resource Inventory Process for Regional Plans, Predicting Quantitative and Qualitative Values of Recreation Participation and The Economic Impact of Recreation Development. Here's a Canadian publication from Ontario, Recreation Review. The Journal of Leisure Research is put out by the National Parks and Recreation Association in the United States. This is a review of empirical analysis based upon national recreation surveys. Two titles which illustrate the type of research found in this journal are: Recreation Demand Surveys: Techniques, Terminology and Technology, and Methodological Perspectives for the Study of Outdoor Recreation. The

National Parks and Recreation Association also puts out minor publications such as Guideline.

Mr. Silver of Environment Canada didn't mention the other day that under their Lands Directorate there exists an outdoor recreation open space reference system. This is a computerized listing of individuals and firms across Canada that have been involved in recreational research and planning. I have a letter that outlines the type of information they are looking for from individuals and companies. We have registered with this data bank and I have registered as an individual.

Here is an example of the kind of thing you should be able to find in a data bank but which is usually lost after submission. It is a document put together by the Grande Cache Chamber of Commerce. One section contains current statistics on tourism across Canada and in Alberta. We would lose this material if we did not have a data bank or a central location to store it. A final example of the type of material that could be stored in this data bank is a document prepared in 1971 by Kates Peat Marwick & Co. for Travel Alberta. It was entitled A Survey Analysis of Resident and Non-Resident Travel.

These documents are available and it is our proposal that a data bank be set up in Alberta to plug into systems like the one that is now being established in Ottawa.

## QUESTIONING BY THE AUTHORITY

DR. TROST:

Your idea of a data bank on outdoor recreation is a good one. I think we have all the material you made reference to, but if there is any material you wish to table with us, we would be pleased to have it.

We ourselves have commissioned studies on the cost benefit analysis of recreation on the eastern slopes and in the forest industry. Since you are in that business you might actually be drawing to our attention your wish for a commission in that area. Is there anything in that?

MR. O'DONNELL:

We would certainly be interested in making a submission on projects you may have in mind in the future.

About 1970 a study was commissioned across four government departments relating to an Alberta recreation plan. Mr. Ted Frechette, who was at that time with the Parks Branch, was one of the contributors as was Mr. Larry Beres, a private consultant retained to supervise the study. But we haven't heard anything about it since. Could you give us any information on what is happening with this study?

DR. TROST:

Mr. Beres made a submission in southern Alberta and I think there is reference to it in that submission.

Brief submitted by: Lewis V. Smith,  
9212-87 Street,  
Edmonton, Alberta T6C 3H5.

Just over a year ago, the book, The Limits to Growth, by the Club of Rome, was published. This book showed clearly that the world is limited in natural resources, and that with the rapidly increasing population, we must learn to use these limited resources carefully. This conclusion is well reinforced by the book, Only One Earth, by Barbara Ward and Rene Dubos, based on about 150 submissions by outstanding experts from all over the world. We are already seeing the results in the large increases in price for urban land. There is little doubt in my mind that the big corporations are already pressing to obtain natural resources, or planning to do so, as a hedge against the high prices that are to come, and as a guarantee of supply.

We should by now in Alberta have reached the end of that psychology which regards our natural resources as unlimited. They are in fact strictly limited. Like Timon of Athens in Shakespeare's play, we have been selling our birthright of natural resources at low prices to get the money just to carry on. Suddenly we are faced with the fact that they are nearly gone.

One of the biggest resources is the Eastern Slope of the Rocky Mountains, with its wilderness area. It is one of the few such areas left in North America. While European countries are buying up properties to make into national parks, we already have such an area owned by the Government of Alberta, in addition to the National Parks owned by the Federal Government. It is my conviction, that with a few exceptions for skiing, and possibly for snowmobiling for recreation uses, this area should remain as wilderness park.

The big advantage of this big wilderness area is that it conserves the habitat of the wild life of the area. Every time a new highway is built across it, the animal trails are cut, forcing the animals into smaller areas, of smaller numbers in each. The building of the Union Pacific Railway in the United States cut the huge buffalo herds into two. Thereafter it became much easier to destroy the buffaloes altogether. The National Geographic Magazine a short time ago had an article naming many species of animals that were rapidly becoming extinct. To conserve those in the Rocky Mountain area requires a large wilderness area not cut up by highways.

Travelling in the wilderness should be confined in this way to foot or horseback. Many will argue that the Eastern Slopes should be made wide open for recreational purposes, and so should be made easily accessible by motor car. But this destroys the very thing that makes the wilderness area so attractive. Years ago, Gregory Clark in one of his Packsack articles in the Edmonton Journal made a very astute observation. The well-to-do people of Toronto would buy property in Muskoka to escape the urban area during the summer, and enjoy the wilds. Then they would proceed to make their summer cottages into urban area by "improvements", until the very contrast with the city was lost. This is what would happen if the Eastern Slopes of the Rockies were opened up for businesses to promote tourism. It would not be long before the tourist business destroyed the very reason for its existence by being such a contrast with the cities. It is for this reason that I find the new Kanaskis highway so obnoxious. It was unnecessary, except for attracting tourist business, with the coming results as above.

Man does require this wilderness area for contact with nature, especially in the coming age with its superurbanism, with so many people crowded into big cities. Then it follows that these areas must be preserved from the effects of destruction by developers for profit, such as the proposed Lake Louise development last year, or being overrun and destroyed by mere crowds, as I understand happened to many of the farms surrounding Woodstock, N.Y., as a result of the Rock Festival there, or the one at Mosport, Ont., or even to some degree at Niagara-on-the-Lake this year during Queen Elizabeth's visit. Mere numbers may be pleasing to the tourist business, but mere numbers can trample parks into no-parks in a hurry. In the future some form of regulation will become necessary to preserve the parks, such as is already applied in Yosemite in California, where persons apply and are admitted in order of priority of date of application.

Cutting up a park area by roads also opens it up to accessibility to cause forest fires; and the scattering of litter and garbage other than in proper containers.

I do not know enough about the current conditions in the Eastern



Slopes to comment on the needs to overcome pollution. It may be that the present situation is adequately cared for in regard to air pollution by the Calgary Power Company's two generating plants at Lake Wabamun. How far is the reclaiming of land stripped for coal mining at Wabamun, the Coal Branch south of Edson, Grande Cache, or the Crowsnest Pass adequate I do not know. But it should be adequate. So should be the condition left by the cutting of trees such as at Hinton, the Brazeau Dam area, the Big Horn Dam area, or other places. About 14 years ago, I remember two mountainsides in British Columbia that had been stripped of trees, large and small, in a high rainfall area, opening the soil to being washed away. I could not understand how this had been permitted by the British Columbia Government at that time.

I am convinced that the present governments need to show responsibility to future generations about such areas as the Eastern Slopes of the Rockies. Let adequate areas be set aside for recreation, and the rest kept as wilderness area. Let us remember that once destroyed, the wilderness is destroyed for all the future.

Some years ago, the Edmonton Journal had a cartoon. A man in a totalitarian state had just been arrested by the secret police. His crime? He had been sneaking out at night from his house to enjoy nature directly, instead of looking at nature on the official Television Program. No doubt this was aimed at those who never went out directly to enjoy nature, but sat with eyes glued to the television screen. If we give away our priceless heritage in the Eastern Slopes of the Rockies, whether for money, or for commercial recreation on a big scale, or under pressure as was Timon of Athens in Shakespeare's play, we may find ourselves ending up in the reverse position. With the wilderness destroyed, we will have only the old-time television films to show it.



## QUESTIONING BY THE AUTHORITY

MR. DOWLING:

Is it your opinion that mining operations, like roads, would also affect game herds?

MR. SMITH:

Yes. My impression would be that places like Grande Cache most certainly do.

MR. KINISKY:

I find that the briefs presented by people of your age are remarkably similar to those we have been receiving from young people. What sort of mechanism can we use to bring together these two groups at opposite ends of the age scale to provide some guidelines to those of us in the middle who are supposed to know it all?

MR. SMITH:

Do you want an answer to that question?

MR. KINISKY:

Yes, sir, I do.

MR. SMITH:

I was born in 1898. I had my elementary education before and during the first years of World War I. In other words I lived at the end of the Victorian Age and was to a large degree brought up in the values of that age. Despite all the nasty words said against them I have a high regard for most of the values I learned as a boy. I suspect that those values, which have been so changed around in the intervening period and especially since World War II, have enabled me to see a lot of things that other people do not see.

I came to the conclusions of these two books before the books were put out. True, my observations were only on a small scale. In my chemistry classes at Alberta College I was teaching about pollution about 15 years before it hit the headlines. True, my vision of pollution was not as broad as we now conceive it. Although I didn't have the book *The Limits to Growth* at the time, I was teaching that our resources were coming to an end. True, I was basing it only on a narrow and limited view, but I could see the thing coming. I was telling my classes that in the future garbage dumps would be the mines where people would have to dig down to get some of the scarce resources.

Maybe this is a very pessimistic outlook, but I'm afraid this is my outlook and I think it's completely vindicated by these two books. If people wish, let them challenge it. But this is my viewpoint. That is one of the reasons we should conserve our resources in the eastern slopes to the best of our ability.

MR. KINISKY:

How can we develop the new social attitude you are suggesting?

MR. SMITH:

The Bulletin of Atomic Scientists likens our age of using up energy to a person falling from a very high building. It's very exhilarating at first, just a free fall through the air. But then you realize that you are accelerating. You begin to think that perhaps you had better stop, but you keep right on going.

I cannot tell you what is going to awaken people to the fact that the supply of energy is limited. With the increase in population this means energy per person is limited. With the difference between the poor and rich and other factors it is further limited. We must pull in. We will have to stop using our cars as we use them today. We will have to try to economize by having smaller cars and using public transportation. We have to economize so we don't just simply grab all the resources and use them up in one generation and come down bang and have a final break-up for everybody.

LAND USE AND RESOURCE DEVELOPMENT IN THE  
EASTERN SLOPES

Brief Presented by: M. GAWLAK

The subject of current hearings is of such vast scope and complexity that it would be presumptuous of me to offer specific proposals for development of the Eastern Slopes. I shall limit my presentation to a few points of policy which I would like the Government of Alberta to adopt in planning and regulation of future development in the foothills region of the Province.

LAND OWNERSHIP

Maximum public ownership of land should be maintained throughout the region. An express policy should be adopted to regain at the earliest opportunity the public ownership of presently leased or otherwise estranged lands.

Lands granted to approved development projects should be limited to lease of the site containing the actual physical plant. No large areas of land in support of recreational development should be granted to individual or corporate developer.

CONSERVATION

Conservation of wildlife, land and water should be the guiding principle of all development activity.

Preservation of renewable resources should be recognized to be far more valuable to Alberta in the future than exploitation of non-renewable resources.

In areas already committed to extraction of non-renewable resources the extraction operations should be conducted only under strict enforcement of existing air and water quality standards, and with full reclamation of disturbed land.

Extraction of resources, if allowed, must be allowed only on economically sound basis. Examples of ARR and Grande Cache must not be repeated.

Whenever a conflict arises between preservation of wildlife and human activity of any kind, either industrial or recreational, decision must be made in favour of preservation.

#### DEVELOPMENT

Natural assets of the areas in question must be thoroughly surveyed before decisions are considered on either industrial or recreational development. A comprehensive planning stage must precede every development. The alternative chosen must minimize the impact of human utilization on the natural values.

In planning recreational facilities for the region, stress should be placed on simplest recreational facilities. These are the most compatible with the policy of preservation, and are within the financial reach of most.

Recreational areas should be mapped out in such a manner as to eliminate conflicting outdoor activities. Above all, areas must be set aside where people, as well as animals, can find refuge from disturbance by omnipresent noise and pollution of motor boats, and all kinds of overland vehicles, both summer or winter.

Prime recreational areas, and particularly all lake and river shores, must be preserved for public use in their entirety. The pattern of parcelling of shores for private enjoyment of privileged few is unjust. It has left for public only but scraps of lake shores in the prairie and parkland regions of Alberta, and must not be repeated again in the Foothills.

Finally I would like to comment on the opinion expressed repeatedly in the Edmonton Journal that the ideas and concerns put forward in the briefs presented to the Environment Conservation Authority are of limited weight because they do not represent the views of the silent majority. I wish to point out that the silent majority, which the press seems to be so anxious to incorporate into the weighing of the opinions presented to the Authority, probably has no opinion to express on the subject. Never in the history of mankind a majority of people were in the forefront of awareness of new concerns, or were the initiators of

action or ideas. Besides, nobody really expected the numerical majority of Albertans to come forward to present their views; or perhaps some reporters of the Journal did.

## QUESTIONING BY THE AUTHORITY

MR. KINISKY:

What in your opinion makes an extractive industry economically sound in the context of all the people of the province?

MS. GAWLAK:

The benefits must substantially outweigh the 'disbenefits'. For instance in developing the Grande Cache region, it cost \$135 million just to build the railway. Now we are running it at a \$7 million loss compounded annually. The revenue from the coal extracted is ten cents per ton which is quite ridiculous. It brings the province about \$400,000 a year. At this rate of return we are never going to recover the money spent on the project.

What do we get in return? Just the destroyed natural area. The benefits go to the steel industry in Japan. Of course there are some jobs created. But with the \$135 million and the \$7 million a year we could create tremendous income for a far greater number of people. If we just distributed it freely among those people I'm quite sure there would be some with the initiative to start businesses of their own which would be much more profitable and less destructive to the environment.

MR. DOWLING:

When you speak of "otherwise estranged lands" do you suggest that the government take back private lands?

MS. GAWLAK:

Only if they are essential for some public use or if they are of some value to the public like archaeological sites and vital wildlife ranges and recreation areas. Otherwise I suppose it's too late to reclaim private land. It would cost too much. But reclamation of leased land should take place.

MR. DOWLING:

Would you be in favour of having public hearings on any specific industrial or recreational development when it got to an advanced stage of planning?

MS. GAWLAK:

Public hearings on every development would probably cost too much. But if the project is of sufficient scope and involves a large area and a lot of natural assets then I would say yes.

Brief submitted by: Miss Kati Dowling  
Edmonton, Alberta

MISS DOWLING:

My name is Kati Dowling and I'm 13 years old.

When I was quite small but old enough to remember, my parents used to take me to the Rocky Mountains. I loved being there because my brothers and I could play cowboys and Indians without the people next door laughing.

Also, when it was late we could hear the coyotes and sometimes the elk trumpeting in mating season and the birds singing, instead of people revving their motors, laughing and smashing beer bottles, et cetera.

I loved going to the Rocky Mountains, but now it's too crowded and the animals won't come near the camp because of all the people. I'm here to ask you to save the Rocky Mountains and the forest reserves so my children and their children's children can enjoy them as much as my family did.



Brief submitted by: Mrs. Alberta Cole  
Nordegg

MRS. COLE:

Alberta Cole. I'm appearing as a private citizen.

I own 15 acres of land on the forestry road between Robb and Nordegg. Perhaps what I do with the the land is not the business of this meeting, but I feel that my concern over what happens on the eastern slopes is connected with what I wish to do with my land.

I would like to develop a small business, because there are no services at all between Robb and Nordegg. I would like to develop a small gas station, a small pub seating perhaps 40 to 50 people, and a small store. Along with this I would like to see some type of art centre situated there in which local artists could develop ceramics, using local clays and experimenting with local glazes. Also, a type of drama centre, such as the one they have at Olds, should be built so we can perhaps have summer drama festivals.

I feel that in our urban society people are divorced from each other and they go out into the wilderness to become whole people again. I agree with the Fish and Game Association in objecting to large complexes. When an area is built up on the eastern slopes of the Rockies, I think it would be a small, community-centred complex where people can get to know each other again.

I was raised in a forest reserve. I saw what happened when the highway was put in. For the people who lived there, it destroyed a way of life. We can't be selfish and keep that way of life to ourselves forever. But I do think that we must protect our environment and keep it as it is.

## OPEN DISCUSSION PERIOD

MR. KYLLO:

Leo Kylo, Western Conservation Foundation.

I would like to express my appreciation to Mr. Welsh for raising a subject that has not previously been covered during the hearings, and that should be of great concern to us all.

I suggest that many of the environmental and conservation groups would support his proposal in full and that some of the personnel of these organizations would be available as volunteers in the program. I think it's something that has gone too far for too long and it's about time we took more care with our social problems.

MRS. McDONALD:

Dorothy McDonald.

I take exception to the statement that our tourist and camp facilities are not really available to low-income people. I think everyone can afford a tent, sleeping bags and the necessary kitchen utensils. I speak from experience. When we get married we don't have too much and we all start out camping with a tent. As we progress in our economic status we can afford something better. I know people who just don't like camping and I think there are a lot of people just like them. They prefer to have more indoor facilities.

MR. RADVONY:

Merv Radvony, Edmonton Fish and Game Association

On behalf of the association I would like to state a couple of major points. One of them is that we fully support the Alberta Fish and Game Association brief presented in Red Deer.

Mr. Smith presented one point we had in our brief, namely the possibility of populations levelling. We would like you to consider this in your planning. Expansion of facilities should be very carefully thought out before construction proceeds so they are not too large.

I would like to question this matter of snowmobile damage. It's been my experience from some lectures by Dr. William Fuller at the University of Alberta that there is subnivean damage. There is a small area immediately above the ground when you have a large snow cover. This is where all the small non-hibernating creatures, microtines, et cetera live during the wintertime. Snowpack can hinder access to the areas where they feed. As they are small animals the snowmobile might cause some damage. Consequently the snowmobile associations might like to make a study of this and restrict themselves to particular areas.

DR. TROST:

Have you personal observation of compaction at that level?

MR. RADVONY:

Last winter on a course we took snow compaction measurements. There is considerable compaction right down to the ground in relation to ordinary drifted areas. It was useless to even try for compaction

in the forest. We were not in areas where snowmobiles had gone. On fields where field mice might live there was definite compaction. There seems to be a critical limit of about 20 inches of snow before this subnivean environment opens up. Up to this 20 inch depth it doesn't exist. Compaction may limit access to creatures that like to tunnel at ground level.

MR. KINISKY:

How many of your own Fish and Game Association members use snowmobiles in their hunting expeditions?

MR. RADVONY:

I would like to point out that that is my private observation and not that of the Fish and Game Association. Obviously a lot of Fish and Game Association members use snowmobiles in their hunting activities and are probably doing some of this damage themselves. It's minor to some extent but at the same time this microtine development is necessary in the food chain. How much damage extensive snowmobiling would cause is very difficult to say. Personally I think that using the snowmobiles along specified trails minimizes it quite a bit. People have the right to use these machines, so there should be no objection to them along trails where they don't disturb natural areas.

MR. RYTZ:

Arden Rytz. I represent the Alberta Forest Products Association, at least for the first question. The second question will be my own.

I'd like to refer to selective cutting and in particular to a brief that Mr. Tom Silver presented on behalf of Environment Canada the other day. For the record, I am a member of the research program committee of the northern research lab and I suppose I can call myself one of the clients he referred to.

With regard to selective cutting, I think we had programs of selective cutting in the forest industry in Alberta right up until the mid-60s. We started with a very crude form of this type of cutting, diameter-limit cutting, on our old timber sales when we were operating strictly under a harvest licence agreement. During the mid-50s and up to the mid-60s we graduated to various types of selective cutting, even to the degree of marking sanitation cuts.

In the operation of extracting timber our biggest problem is regeneration. Selective cuts, from the point of view of the industry, are expensive. From the point of view of practicability, there is nothing magic about them. I think we've had more problems regenerating selective-cut areas than those areas where we were clearcutting.

As I mentioned in Calgary, our forests are basically even-aged or of fire origin and therefore apply themselves to a form of even-aged forest management. This seems to incorporate some method of clearcutting, either by patches, strips, shelter wood or what have you.

From the point of view of economics it appears to add up to regeneration. From results we've had to date - and as you know we're in our first phase of forest management programs here, both on the quota systems and on some of the leases - the success of regeneration, I think, is pretty encouraging in our clearcut areas, certainly much more so than in some of our selective-cut areas.

Now, my point is this. In its brief, Environment Canada makes a statement that alternates to clearcutting could be applied now, and then qualifies it re some subalpine spruce-fir forests. Future forests could be designed using a variety of species, age and spacing arrangements. I'm not aware of any research in that regard. There were some requests for research by the lab on the environmental results of clearcutting. This was in 1969 and it was not approved. However, there was a written review done on large clearcuts versus small clearcuts. But this was the extent of it. Because of the nature of the organization, I am concerned about the statements in this document.

It is interesting that the same point was made in Calgary in a brief presented by the National Parks Branch where, I believe, they advocated that selective cutting should be the program. As a forester I can't quite agree with this because I feel that within the parks the forest land management policy is a policy of no management.

Now I will speak as a private citizen for just a moment. I've heard a lot of talk about wilderness, wilderness parks and so on being used basically for recreational pursuits such as hiking, fishing, hunting, snowshoeing and cross-country skiing. As a person vitally interested in the alpine discipline of downhill skiing, I'm rather concerned that in the hearings I attended alpine skiing wasn't emphasized as much as these other pursuits. I am involved at club

level with youngsters in this discipline and I'm also a director of the Canadian Ski Association, Alberta Division. However, I'm speaking for myself and not those two groups.

I can remember Banff and Jasper when you had a tough time finding a restaurant open to get a meal. It was alpine skiing that really created the first winter population explosion in the mountains. I think probably cross-country skiing will create another explosion. By no means has the initial explosion of population or the drift of people in the winter to the parks slowed down. My concern is that in the Province of Alberta there is only one mountain ski resort on the eastern slopes outside of the national parks. Maybe there are reasons for that. I think there were a number of bad judgments in the past. After areas were established snow conditions may have been bad or perhaps it was difficult for people driving off highways to get to them. Maybe they were established too soon. I don't know. But I'm very concerned that all of our downhill ski facilities are within the confines of the national parks.

As an Albertan I don't think I express an opinion that conflicts with others here when I say that the eastern slopes should be for our use as Albertans. I am not excluding people from the rest of Canada or the rest of the world, but pressures are increasing. I think some studies should be made to determine what areas can be used for alpine skiing. There is no question about it; facilities are overcrowded now. Traveller counts within the national parks have doubled within the last three to five years, and will continue to show increases.

I'm rather frightened that in this particular area we may have to rely on a decision that is not made in Alberta. I think government may be required to become involved in proper surveys for locations so that sites can be established whether they are used today, tomorrow or ten years from now. We should have better information on the type of area that is required.

DR. POWELL:

John Powell, Canadian Forestry Service.

Because Arden Rytz referred to a study I'm personally involved with, I thought I should come up here for the record. I'm not going to talk about the difference between selective cutting and clearcutting. I just want to say that because the advisory committee hasn't met for a little while, Arden may not be aware that studies relating to the environmental impact of clearcutting are going on in Alberta on the North Western Pulp and Power lease.

I'm employed as the forest climatologist there and am now in the third year of studies which will tell us something about the climate of these clearcut areas once the forest has been removed. Also, a silviculturist just started a study this year, and we're going to follow with a growth analysis study relating growth of white spruce and lodgepole pine to the microclimate out from the stand edge into the clearcut area. We're trying to decide how these clearcuts affect the environment. To what extent are the various climatic parameters changed or modified by the clearcut away from the residual stand edge? As a general rule, the effect of the stand edge is felt up to only two or three times the stand height into the clearcut. Therefore, once you get to the middle of these big clearcuts a different basic climate exists. We want to know how we can modify existing management practices for better establishment of such things as spruce seedlings on these basic areas.



MR. VEEMAN:

Terry Veeman, Assistant Professor of Economics and Agricultural Economics at the University of Alberta. My areas of interest are resource and development economics.

Some of the material that has been presented makes an excellent start toward a descriptive analysis of the problems we're facing, but only makes a very modest start toward analysis of those particular problems. Of course these are very complex problems involving both quantity and quality issues of several resources. So we're faced with allocating resources among different uses and users and also trying to establish which resources we want to extend in terms of greater use in the future. Obviously we shall have to draw up a master plan. What then do we have in terms of economic goals for such a plan? I suspect it's been mentioned to you that one goal might be to maximize net benefits to society. Then, of course, we would have to establish what society. Primarily it would be Albertans with some thought given to the rest of Canada and the rest of the world. People might suggest to you too, when you're thinking in terms of goals, the idea of maximum sustained yield, although economists are somewhat sceptical of that particular goal.

Something else that floats around in the literature is the idea of being very careful in husbanding flow resources, the renewable resources of the region. I would ask the Authority to be particularly worried about flow resources, more so than stocks, and the problems of attempting to develop institutions to deal with those flows.

When we attempt to maximize net benefits to society over the future, there are some really nasty problems. One, of course, is estimating benefits which are not priced in the market, and recreation benefits would be in that bag. As Mr. O'Donnell suggested we have had attempts to get at them. There should be more studies along those lines. The state of recreation benefit estimation is pretty crude.

Another management objective often flung out is the idea of multiple use. That can be very vague and misleading at times. It's all right if resource use is complementary, but it's not a good guide if resource use is competitive. The problems in the eastern slopes are going to be those of increasing competitive and conflicting demands, and that's where multiple use isn't going to help you very much. I would like to comment on various uses.

Coal: I would agree with Ms. Gawlak that the net benefits of coal extractions to Alberta seem to be very low if not negative at the moment. Unless there is a greater return to the province, I cannot put that use too high on my list of priorities. Furthermore speaking as a resource economist, I feel that strip mining gets us into what we call critical zones and the destruction of resources to a point where it's impossible either economically or technically to reverse the rate of use. Coal extraction worries me quite a bit, because there must be a significant return to Albertans.

Grazing: Even with the price of meat at \$2.15, it would seem to me that grazing is the type of activity that could be slowly phased out of this area if there was increasing pressure from ungulates. Despite the world food scares at the moment, and I'm very concerned about that issue, there is considerable capacity for the production of food for North America and it would seem to me that some of our cereal land should be used for pasture, cattle land and so on.

Recreation: I think this will be the key use over the next 40 or 50 years. Of course it must be tied in with some overall plan. I

sympathize with you gentlemen trying to develop a plan when often our provincial and national goals are very unclear, whether in respect to recreation development in the province or an energy policy for the nation. It's difficult to generate a plan and goals for a subset. As some parks people have pointed out, preservation is the name of the game.

So we do need some expanded commercial development along the eastern slopes. I was glad to see one or two submissions where there was actually some hard data with respect to the economic operations of private concerns, because it seems to me that this recreational development will have to be staged over the next 10 or 20 years. We know that institutions along the slopes have failed in the past. I found the Silver Summit data very interesting to go through because it gave me some insight into the economics of the operation of some of the other concerns. So I think this staging idea with regard to recreation is very critical.

Concerning the recreation proposals themselves, we run into the problem of an appropriate blending of public and private functioning. We get into horrible problems in dealing with financing, leasing and operation of recreational ventures on Crown land. Of course there are many possibilities here and it seems to me this is another area for further study. For instance, we could give private people a long-term lease with no lease payment, maybe even tax holidays. We could have American financing, maybe no public representatives on the boards at all, very cursory regulations and institutions catering primarily to rich Americans, Japanese and Europeans. I think you've heard some of that already.

Another possibility is to run some of these recreation ventures as Crown corporations. Of course, Eric Kierans has been suggesting that possibility for the mineral resources of Manitoba. Now, given the political philosophy of this province and of this government I would guess, politics being the art of the possible, we are going to opt more for the private enterprise route. But it does seem to me that we're going to have to increase the degree of public control and management and return to Albertans. That's going to occur. That means perhaps public representatives on boards, stiffer regulations across the board, the possibility for Albertans to invest in these ventures and 51 per cent Canadian rules.

Maybe we should consider running some of these ventures closer to the public utility idea. They are private ventures, but when they start thinking about the quality and quantity of what they're providing and the rates they're going to set for some of these services, perhaps the public utility idea might fit in with the idea of retaining them as private enterprise ventures. It seems to me that this idea has to be explored as well as the pricing of services.

I have two more comments. One is that The Limits to Growth is a very controversial book. Economists have been somewhat sceptical about some of its conclusions, and I refer you to critics of that book as well as the positive views it puts forward.

Finally I think the main question is, where do we go from here? It seems to me that we do need some sort of ongoing group within the provincial government. It has concerned me for some time that the small research group working on the economics side - I believe it's under Mr. Nowicki in the Department of Lands and Forests - is really not a group that has great status within the government in that most of the gentlemen employed have temporary status. Some of them are my ex-students so I receive reports from them at times. It does seem to me that the study of resource use along the eastern slopes demands a



planning unit within the provincial government of more than temporary status. Perhaps it should be under the Department of the Environment. But the development of a policy won't be done, I'm sure, in the next six months. It's going to take us a decade or so to develop it.

DR. HABGOOD:

Harry Habgood, the Alpine Club of Canada.

I'd like to make a comment relative to one of the points Dr. Veeman mentioned. It concerns us that a great number of the commercial proposals combine the provision of services to the public with the provision of land for private summer or winter cottage developments. We are quite unhappy about this and would like to see these separated. I think the provision of services over a wide range to the public is certainly justifiable, and while we have reservations about some of the proposals with respect to their location and so on, that is quite different from setting up a new colony of private cottages or second residences. In allowing these to be added as part of a proposal for public services, we will be opening up a very serious inroad into the eastern slopes.



**LAND USE  
and  
RESOURCE DEVELOPMENT  
in the  
EASTERN SLOPES**

**LIST OF  
PUBLICATIONS**

The following publications prepared by or on behalf of the Authority are available on request while they remain in stock.

In some cases a charge will be made.  
Requests should be addressed to,

ENVIRONMENT CONSERVATION AUTHORITY  
9912-107th STREET EDMONTON, ALBERTA T5K 1G5  
Tel. (403)423-2247

**ENVIRONMENT CONSERVATION  
AUTHORITY**

**ALBERTA**



ENVIRONMENT CONSERVATION AUTHORITY

LIST OF PUBLICATIONS

Environment Conservation Authority. Brochure. Revised edition. 1973.

Environment Conservation Act, 1970, being chapter 36 of the Statutes of Alberta, 1970, with amendments up to June 2, 1972, including pertinent sections of other acts referring to the Environment Conservation Authority. Office Compilation. 10 pages.

Annual Report

Environment Conservation Authority. First annual report, November 1970 to November 1971. April, 1972. 101 pages.

Environment Conservation Authority. Second annual report, December 1971 to December 1972.

Environment Conservation Authority. Four Ways Forward: education, management, economics, legislation, 1972. 27 pages.

PUBLIC HEARINGS

Public Hearings on a Proposal to Restore Water Levels in  
Cooking and Hastings Lakes, August 23, 25, 1971

E.P.E.C. Consulting Ltd. An economic analysis of the Cooking and Hastings Lakes. June 10, 1971.

Macroplan Consultants Ltd. Recreation potential and development feasibility in Halfmoon, Hastings and Cooking Lakes. July - August, 1971.

Prospectus: Cooking and Hastings Lakes public hearings, Edmonton and South Cooking Lake, Alberta, August 23, 25, 1971. 8 pages.

Proceedings: public hearings on a proposal to restore water levels in Cooking and Hastings Lakes, August, 1971. 1 v.

Summary: public hearings on a proposal to restore water levels in Cooking and Hastings Lakes, August, 1971. 64 pages.

Report and Recommendations: public hearings on a proposal to restore water levels in Cooking and Hastings Lakes, August, 1971. (When available)

Public Hearings on the Environmental Impact of Surface  
Mining in Alberta  
December 13, 15, 17, 21, 1971 and January 6, 1972

F.F. Slaney and Co. Environmental Impact of Surface Coal Mining Operations in Alberta. November, 1971. 59 pages. (Reproduced in the proceedings)

Prospectus: the environmental impact of surface mining in Alberta, December 13, 15, 17, 21, 1971 and January 6, 1972. 6 pages.

Proceedings: public hearings on the impact on the environment of surface mining in Alberta, December, 1971, January, 1972. 2 v. \$4.00.

Summary: public hearings on the impact on the environment of surface mining in Alberta, December, 1971, January, 1972. 205 pages.

Report and Recommendations: public hearings on the impact on the environment of surface mining in Alberta, December, 1971, January, 1972. (When available)

Public Hearings on the Conservation of Archaeological and  
Historical Resources in Alberta  
May 25, 29, June 1, 1972

A prospectus for public hearings: the conservation of historical and archaeological resources in Alberta, May 25, 29 and June 1, 1972. 7 pages.

Position paper for public hearings: the conservation of historical and archaeological resources in Alberta prepared by the Public Advisory Committee on the Conservation of Historical and Archaeological Resources. March, 1972. 8 pages. (Includes three page addendum)

Report: the conservation of historical and archaeological resources in Alberta prepared by the Public Advisory Committee on the Conservation of Historical and Archaeological Resources. March, 1972. 32 pages.

Proceedings: public hearings on the conservation of historical and archaeological resources in Alberta, May 25, 29 and June 1, 1972. 67 pages.

Report and Recommendations: public hearings on the conservation of historical and archaeological resources in Alberta, May 25, 29 and June 1, 1972. 120 pages.

Public Hearings on the Environmental Effects of the  
Operation of Sulphur Extraction Gas Plants  
October 2, 5, 11, 16, 19, 1972

Klemm, R. K. Environmental effects of the operation of sulphur extraction gas plants. August, 1972. 116 pages.

Terms of reference for public hearings: environmental effects of the operation of sulphur extraction gas plants, June, 1972. 2 pages.

A prospectus for public hearings: environmental effects of the operation of sulphur extraction gas plants, October 2, 5, 11, 16 and 19, 1972. 8 pages.

Proceedings: public hearings on the environmental effects of the operation of sulphur extraction gas plants, October 2, 5, 11, 16 and 19, 1972. 3 v. 1,743 pages. \$6.00.

\*Report and Recommendations: public hearings on the environmental effects of the operation of sulphur extraction gas plants, October 2, 5, 11, 16 and 19, 1972. 128 pages.

Public Hearings on Land Use and Resource Development  
in the Eastern Slopes  
June - July, 1973

Information Bulletin Number 1: Terms of reference.

Information Bulletin Number 2: Current Status Report on Alberta's Eastern Slopes.

Information Bulletin Number 3: Information Centres and Source Material.

Information Bulletin Number 4: Commercial Proposals Bulletin.

Information Bulletin Number 5: Planning Statement - Oldman River Regional Planning Commission.

Information Bulletin Number 6: Planning Statement - Calgary Regional Planning Commission.

Information Bulletin Number 7: Planning Statement - Red Deer Regional Planning Commission.

Information Bulletin Number 8: Planning Statement - Peace River Regional Planning Commission.

Information Bulletin Number 9: Planning Statement - Athabasca-Yellowhead

Information Bulletin Number 11: Task Force Position Paper.

Information Bulletin Number 12: Science Advisory Committee, Ad Hoc Committee Paper on Land Use and Resource Development in the Eastern Slopes.

Public Hearings on the Restoration of Water  
Levels in the Peace-Athabasca Delta

A prospectus for public hearings: the restoration of water levels in the Peace-Athabasca Delta. September 25, 27 and October 2, 1973. 7 pages.

Smith, S.B. The Peace-Athabasca Delta, a choice of water management alternatives. August, 1973. 33 pages. (includes matrix)

The Peace-Athabasca Delta Project Group. Technical Report: a report on low levels in Lake Athabasca and their effects on the Peace-Athabasca Delta. 1973. 176 pages. illus.

The Peace-Athabasca Delta Project Group. Summary report: the Peace-Athabasca Delta, a Canadian resource. 1972. 144 pages. illus.

Public Advisory Committee on the Environment; proceedings of the first annual meeting, MacDonald Hotel, Edmonton, Alberta, November 25, 26, 1971. 125 pages.

Public Advisory Committee on the Environment; proceedings of the second annual meeting, Alberta Vocational Centre, Edmonton, Alberta, October 20, 21, 1972. 309 pages.

Science Advisory Committee; first annual report, 1972. 55 pages.

Additional Studies Available

Underwood, McLellan and Associates Ltd. A preliminary assessment of environmental impact of oil and gas exploration and pipeline operations in Alberta, June, 1972. 51 pages.

E.P.E.C. Consulting Ltd. and C.L. Sibbald, Agri - Business Ltd. The forest resource in Alberta: an examination with respect to Conservation, Recreation and the Forest Industry. 1972. \$30.00.

DR. WALTER TROST

Trost, Dr. Walter Raymond. Environmental management; presented to the Edmonton Chamber of Commerce, February 16, 1972. 11 pages.

Trost, Dr. Walter Raymond. Employment, productivity and environment; presented at the annual convention of the Alberta Federation of Labour, Calgary, Alberta, May, 1971. 11 pages.

Trost, Dr. Walter Raymond. Managing the changing environment; presented to the 1973 Annual Convention of the Alberta Society of Petroleum Geologists, January 18, 1973. 8 pages.

\*Being compiled at the time of this listing.







676 p.